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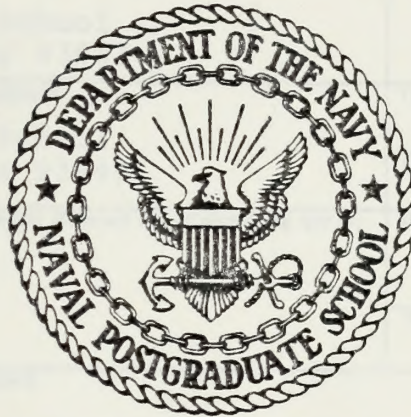






# NAVAL POSTGRADUATE SCHOOL

## Monterey, California



# THESIS

INFORMATION REQUIREMENTS ANALYSIS:  
AN APPLICATION

Richard Bray Renner

March 1984

Thesis Advisor:

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several relational data bases and internal reports to support the Department's information requirements, as well as recommending that the analysis approach be adapted throughout the university.





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Information Requirements Analysis: An Application

by

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MASTER OF SCIENCE IN APPLIED SCIENCE

from the

NAVAL POSTGRADUATE SCHOOL  
March 1984





## ABSTRACT

This research applied the methodology of Structured Systems Analysis to the information requirements of the Department of Administrative Sciences of the Naval Postgraduate School. It reviewed all flows of information to and from the Department and showed that even though, in the aggregate, the requirements seem amazingly complex, the analysis can be structured in a sensible, methodical system. The author also recommends several relational data bases and internal reports to support the Department's information requirements, as well as recommending that the analysis approach be adapted throughout the university.



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## I. BACKGROUND

The Administrative Sciences Department is the organizational home of the management faculty at the Naval Postgraduate School. The Department, as it will be known hereafter, employs 61 professionals, both civilian and military, comprising 28 different academic disciplines. Its eleven graduate programs have produced almost 4000 graduates in its 22 year history, averaging approximately 300 students enrolled at any one time throughout the year. The major fields of management that are supported by the Department are:

- Financial,
- Information Systems,
- Logistics,
- Manpower/Personnel/Training,
- Organizational Development, and
- Telecommunications Systems.

In addition to their educational responsibilities, Department faculty have research responsibilities as well. At the time of this writing, 43 different research accounts from 18 separate sponsors are active within the Department with a total budget of \$2,121,497.

As the Department evolved and its information needs became more complex, each new requirement was approached by an understaffed administration on an adhoc basis without adequate





consideration of information integration. All requirements, both external to the Department and for internal efficiency, were fulfilled, but with the use of considerable manpower. Within an information-intensive organization, this approach is costly and inefficient. This is not to say that this example is an isolated one. A Stanford Research Institute study reported that during the 1960's, industrial productivity in the United States increased by 83%, while "knowledge workers'" productivity rose only 4% [Ref. 1]. The knowledge workers of the Department needed help. They need, not only more efficient methods of storing and organizing data, but a comprehensive system to manage information.<sup>1</sup> In fact, even with the myriad of technological advancements today, the greatest potential of today's information systems is the synergy of increasingly profound integration [Ref. 2]; in other words, the co-ordinated application of all the tools of modern information technology could be of enormous benefit to the Department. This study is the first step of an integrated, systems analysis of the Department's information requirements and will be used as the framework for the actual design of the system of automated and manual information "flows."<sup>2</sup>

This chapter has given the reader an appreciation of the background that has given impetus to this study. The analysis methodology will be discussed in the next chapter, "An Overview to Structured Systems Analysis," and the global view of the Department's proposed information system will be examined in the following chapter, "The Context Diagram."



## II. AN OVERVIEW OF STRUCTURED SYSTEMS ANALYSIS

This chapter will present to the first-time reader of Structured Systems Analysis concepts a brief, but insightful, overview of a discipline of "compelling elegance" [Ref. 3]. First, the problems that can be expected to be encountered during the analysis phase will be examined. Following that, the discussion of the nature of structured analysis will be divided into several sections. The first two sections cover the tools and procedures of Structured Analysis. Then, finally, the author sketches the characteristics and the qualities of a document DeMarco [Ref. 4] calls "the Target Document." After this brief journey, the reader will be ready to explore the complexities of the next chapter, "The Context Diagram."

### A. THE PROBLEMS OF ANALYSIS

If one pauses to reflect on the actual thought process that a systems analyst probably must use, one would believe that no sane person would undertake such a task. An analyst is expected to interview a functional user<sup>3</sup> in much less time than the user used to learn his job and then to describe the function so succinctly that a third party can convert the description to a computer code. The traditional result, DeMarco [Ref. 5], over the past 20 years, has been a narrative that is





redundant, wordy, excessively physical<sup>4</sup>, and tedious to read. If the analyst has enough courage to attempt to get the user<sup>5</sup> to verify that his narrative accurately models the function originally described, most users reject the technical language and, all too quickly, surrender their concurring signatures. Without fullfledged user concurrence, the analyst is taking a chance on not recording some subtleties that the user was convinced that he had explained in-depth and hence risking the ultimate acceptance of the information product, if not the system.

Another handicap facing most seasoned analysts is that they have matured in the Automated Data Processing environment and view functions via traditional methods, i.e., keypunch, magnetic tapes, and listings of computer print-out. The second likely pitfall, then, is a too rigid description by the analyst of essentially minor details, such as whether a file will be constructed with pointers or as a relational data base<sup>6</sup>. The number and type of characters, for instance, used in a name of an item is not very important at the time that the analyst should be concentrating on first defining that item.

How should, then, an analyst proceed to describe a function? That is what will be described next by looking at the nature of structured analysis.

## B. THE NATURE OF STRUCTURED ANALYSIS

The primary reason for structured analysis (SA) is that it has been found effective in minimizing the probability of the



analysis errors which were described in the previous section [Ref. 6]. The analyst concentrates first in obtaining user concurrence in describing the actual physical flow of the data. The flow is defined graphically, not in standard ADP flow-charting symbols, (which can be frightening to the un-tutored), but in relatively simple symbolism: circles, lines, boxes, which are all, for the most part, labeled with functionally descriptive names. The analyst defers talking about any control points—how decisions about the data are made—at this time, merely describing the physical journey "from the viewpoint of the data" [Ref. 7], i.e., "John sends form A to Mary, who files the 3rd copy, and then she sends the other two copies to Ed."

From this point, the analyst does two things:

1. shifts from a physical description to a logical one, i.e., "The form enters the 'system', is recorded in a history file, and then the customer's credit rating is checked.";
2. begins to subdivide, or partition, each function into its component parts. Function number two, for instance, could have two components, e.g., 2.1 and 2.2. Function 2.1 possibly may consist of many components itself, i.e., 2.1.1, 2.1.2, etc. Throughout this second phase, the analyst must ensure that the user concurs with the logical description and its subsequent partitioning.

Another benefit of starting with a global, or top-down, view and moving to lower, partitioned levels is that changes



are easier to make. How do changes come about? Here are some obvious reasons, though not an exhaustive list:

1. The analyst could have made a mistake in describing the data flow.

2. During the analysis time period a new requirement may be defined, i.e., a new report is required.

3. The user may suggest an enhancement, i.e., "I've always wanted to measure how long it takes us to do that, but it was always too much trouble."

It definitely is much easier to make such a change at that time then after the new system<sup>7</sup> has been implemented [Ref. 8].

Finally, after all the partitioning has been completed, the analyst is ready to describe the processes that actually accomplish the work. This set of description, or mini-specifications, is the heart of the Target Document (see above) that DeMarco recommends<sup>8</sup>.

In summary, the major features of Structured Analysis are [Ref. 9]:

1. Graphics are used whenever possible;
2. the system must be partitioned;
3. differentiation is made between the physical and the logical models of the system;
4. the Target Document must be easy to change, and
5. the user must concur with the logical system model<sup>9</sup>.

Now to the specifics of Structured Analysis, the tools and the procedures will be expounded upon.





## 1. The Tools of Structured Analysis

The tools of Structured Analysis form a set of reasonably precise methods that enable the analyst to act as the interface between the user and the eventual system designer<sup>10</sup>. The reader may sense that the techniques described below are laborious and, to a degree, superfluous, but careful definition of functions and specifications in the beginning will markedly reduce the time spent later in introducing system corrections [Ref. 10]. The major tools are:

Data Flow Diagrams (DFD) are a graphical display of the functional travel of the data. See Figure 2-1. The reader should note some basic conventions of the diagrams:

- (1) The data flows are represented by arrows, whose names are chosen to illustrate what is known about the packet of information that flows over that pipeline.
- (2) The processes, represented by circles, transform data inputs into data outputs. Well chosen process names are those with active verbs and objects named in terms of the net effect of the transformation.
- (3) Files, represented by straight lines, are just temporary repositories of data. Arrows flowing between the files and the processes show only the net flow.
- (4) The data sources/sinks are shown by boxes. The same boxes may appear more than once in a Data Flow Diagram for clarification to avoid crossing lines.

The Data Dictionary actually documents the essential details that should be explained during the analysis phase. The dictionary consists of the following major sections:



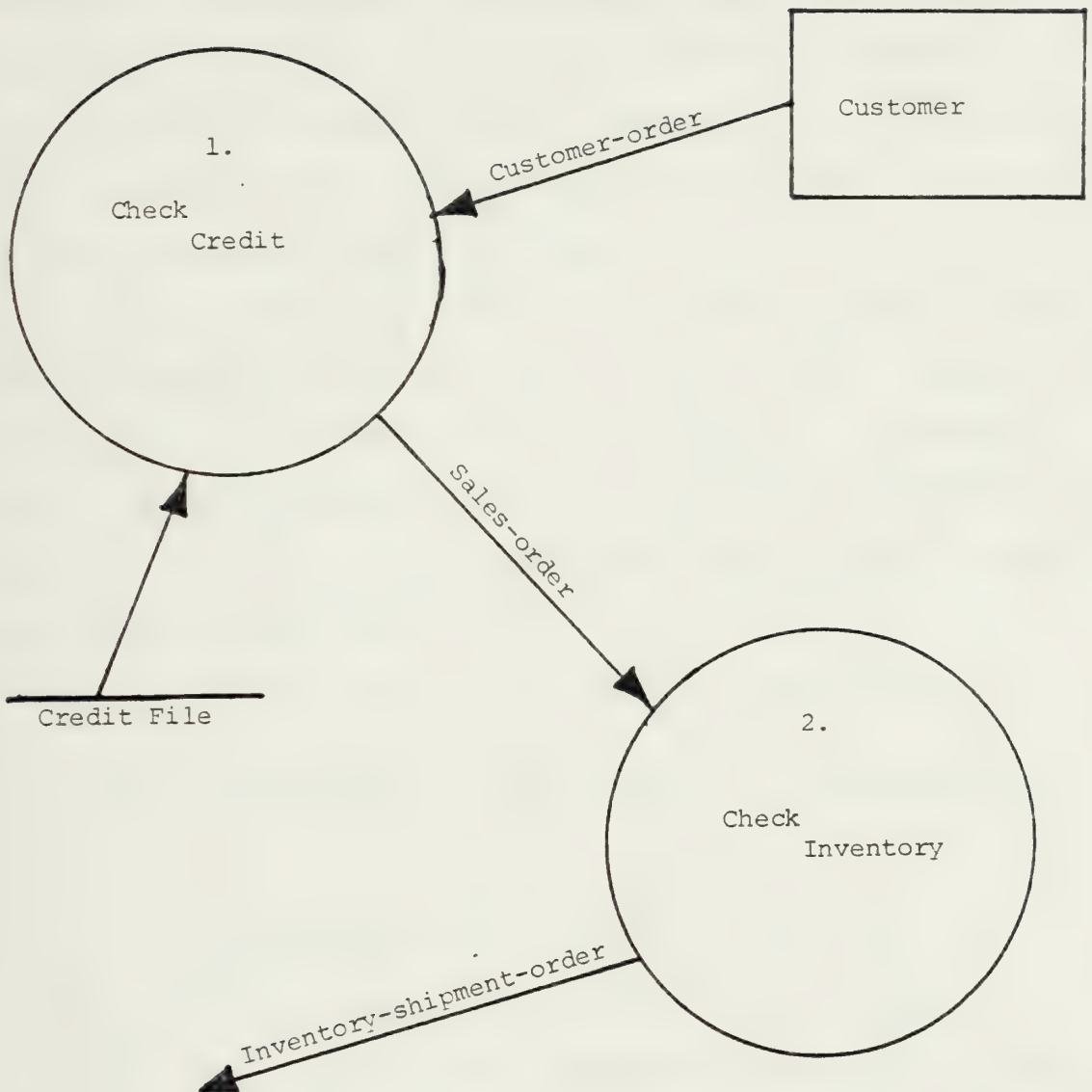


Figure 2-1  
A Simplified Data Flow Diagram





(1) Data Flow Definitions define the specific data elements that are contained in the flow. Figure 2-2 is a simplified illustration. A more detailed discussion of the conventions and symbols of Structured Analysis is contained in Chapter V; however, it will be necessary to define the three symbols that appear in this overview. They are the plus sign, the equals sign, and the left/right braces. As part of the Data Dictionary, the plus sign (+) is used to symbolize an AND sequence; the equals sign (=) is used to symbolize the IS EQUIVALENT TO sequence; and the braces ( {} ) symbolize ITERATIONS OF an element from 1 to infinity<sup>11</sup>. Therefore, Figure 2-2 should be read, "The data flow named 'data-flow' is equivalent to data-element1 AND data-element2 AND a number of iterations of data-element3.

-----

DATA-FLOW = DATA-ELEMENT1 + DATA-ELEMENT2 + (DATA-ELEMENT3)

Figure 2-2

A Simplified Data Flow Definition

-----

(2) Data Element Definitions describe the exact meaning and, usually, the range of values that the element can take. It is not necessary to fix the alpha-numeric construction of the element, at this time; however, that task can be safely deferred until the design phase. Figure 2-3 is an example of a Data Element definition.



(3) File Descriptions list each Data Element that resides in the file and show how each individual record could be retrieved. For instance, a file of students may have as a primary key the last name, but may have secondary keys of social security number and religion. Therefore, an

DATA ELEMENT DEFINITION: FULL-NAME	
ALIASES: NAME	
FULL-NAME = FIRST-NAME + MIDDLE-NAME + LAST-NAME	
NOTES:	TELEPHONE-FILE SCHOOL-LIST DATA FLOW

Figure 2-3

A Simplified Data Element Definition

inquiror could search for an individual record by asking for a specific last name or social security number and could also get a list of all students in the file who are Buddhists, for example. Figure 2-4 gives an example of a file description.

(4) Process Descriptions look at what is being accomplished in each bubble of the Data Flow Diagram (see



Figure 2-1) and describes transformation in a manner that is designed to minimize misinterpretation. Appendix A, the Data

---

PERSONNEL-FILE = FULL-NAME + ADDRESS + CITY + STATE + ZIP +  
TELEPHONE NUMBER

Figure 2-4  
A Simplified File Description

---

PROCESS NAME:	CUSTOMER-CREDIT-CHECK
---------------	-----------------------

---

PROCESS DESCRIPTION:

FOR EACH CUSTOMER-ORDER

IF VALUE GREATER THAN \$50

ACCESS CREDIT-FILE

IF CUSTOMER APPROVED

PREPARE SALES-ORDER

ELSE REFER TO CREDIT MANAGER

ELSE PREPARE SALES ORDER

---

Figure 2-5  
A Simplified Process Description

---

Dictionary utilizes Structured English, although DeMarco suggests decision trees and decision tables as alternatives [Ref. 12]. Figure 2-5 illustrates a process description.





The tools of Structured Analysis have been examined in some detail with a few illustrations. More concrete examples from this study will be displayed in Chapter V, as well as in Appendix A, the Data Dictionary. Now the reader will cover the general procedures of Structured Analysis.

## 2. The Procedures of Structured Analysis

The general procedures for the conduct of Structured Analysis have five components [Ref. 13):

(a) The Current Physical Data Flow - the first the analyst must do is to find out what is being done. The owner and the responsible user should be queried, but there is no substitute for sitting down with the hands-on user(s) to really "feel" the action. If all three levels of users can define the flows consistently, then the analyst may feel relatively confident that the analysis debriefs<sup>12</sup> will be uncomplicated.

(b) The Current Logical Flow - here the analyst deletes the physical nature of the flows and describes what is being done logically. The analyst neglects, purposefully, to mention how it is being accomplished. There may be a variety of reasons for the manner of completing a function, not the least of which may be historical, i.e., "That's the way we've always done it," or political, i.e., "The boss likes this format." The logical reasons for the data flow have to be evaluated. It may be very difficult also because various elements of the organization may have never stopped to analyze the function before.



(c) The New Logical Data Flow - this is the stage that the analyst has been driving towards because some creativity can be shown in shaping the logic of the new environment. DeMarco [Ref. 14] gives some excellent examples of the type of conceptual redesign that can be done, but he does not give a recipe.

(d) The New Physical Data Flow - from the new logical flow, the analyst then settles down to describing the physical facts of the new system.

(e) The Structured System Specification - this step packages the New Physical Flow Diagram with the supporting documentation and presents the blueprint for implementation.<sup>13</sup>

Now that the reader is familiar with the tools and the procedures of Structured Analysis, it is time to discuss briefly the qualities and characteristics of the Target Document.

### 3. The Characteristics and Qualities of the Target Document

The end product of this Structured Analysis is this Target Document. What is it and how can good ones be recognized? The reader may know by now that the Target Document contains Data Flow Diagrams and a Data Dictionary, but the key word to remember is:

INTEGRATED.

The Target Document that is a product of quality must be an integrated set of diagrams and definitions of a functional system. It must be:





(a) Graphic - the pictorial representations must be ones that the analyst, the user, and the system designer can easily acknowledge the true model of the system.

(b) Partitioned - it may not be possible for each partitioned component to truly stand alone. In most systems, it seems, that need analysis, the interactions between components are complex, and some linkage will always be evident. However, a successful partition will give the reader confidence that all the logical elements are exhibited within the segment.

(c) Rigorous - the data flows and the files will be defined precisely. The Data Elements will show definite meanings and, in some cases, a precise alpha-numeric construction. The data transformations, the Process Descriptions, have firm descriptions of the operation, but, in the analysis phase, the specific algorithmic routine need not be outlined.

(d) Maintainable - corrections and improvements can be made to the Target Document easily and with little cost. This quality is achieved by the partitioning and the decomposing. Individual functions can be "surgically" isolated while the change is being accomplished. A secondary benefit of this maintainability is that changes can easily be evaluated, at any stage of the analysis or design to determine the extent of the effort needed to effect the change.

(e) Logical - removing the elements that depend on the physical characteristics of the system allows the analyst/designer to concentrate on only the important issues that need be addressed during each phase.



Eventually, the system designer will take this Target Document that has been constructed and decide to use it as a blueprint to build a system. That person is the Systems Designer that has been so casually mentioned during the previous discussion.

#### 4. The Systems Designer

The Systems Designer must take the framework of the Target Document and perform two major functions. The designer must:

(a) decide what functions shall be automated and what will continue to be performed in the "old way." Numerous texts, such as Fitzgerald [Ref. 15], present techniques to weigh the decision, i.e., volume of throughput, file retrieval frequencies, etc. This author suggests that it is easier to stop an automated function from being performed and to "slide back" to a manual operation than it is to go back to incorporate a function after a system has been implemented. Experiment with functions that may seem to have a low return on automation. The use may grow as the user develops a facility for its performance.

(b) prescribe with more rigidity the structure of the data elements, the files, and the operating algorithms.

#### C. SUMMARY

This chapter has briefly introduced to the reader the concept of Structured Systems Analysis and the problems involved with its successful completion. The examination of the tools and procedures of Structured Analysis were followed by a



discussion of characteristics and the exemplary qualities of the Target Document. Finally, the important duties of the systems designer were highlighted. The next chapters will discuss the actual target document for the Department.





### III. THE CONTEXT DIAGRAM

In the previous chapter, the general nature of Structured Analysis was described. The major highlights consisted of avoiding detailed narratives, partitioning the major functions, and then transitioning from the global view of the "system" smoothly down through various levels of detail until the operations could be defined logically in the terms of specific processes that cannot be further decomposed. This bottom level DeMarco labels "functional primitives" [Ref.16]. This concept of transitioning, or leveling<sup>14</sup>, allows us to decompose a system gradually showing only enough of a system on a single page that a user or a designer could realistically grasp. Eventually with careful and thoughtful decomposition, a leveled set of Data Flow Diagrams will result. Figure 3-1, a reproduction of Figure 31 of DeMarco [Ref. 17], is a splendid example of a leveled decomposition.

The key to a good start in conducting the analysis is the Context Diagram—diagram 0 of the leveled set. It is the "de-partitioned", as it were<sup>15</sup>, version of the entire system. The only purpose, but an important one, is to delineate the domain of the study [Ref. 18]. With this study, the Department, this may seem somewhat superfluous, but, in actuality, the Context Diagram shows the set of data flows, in both directions, across the boundary of the system.



Diagram 0

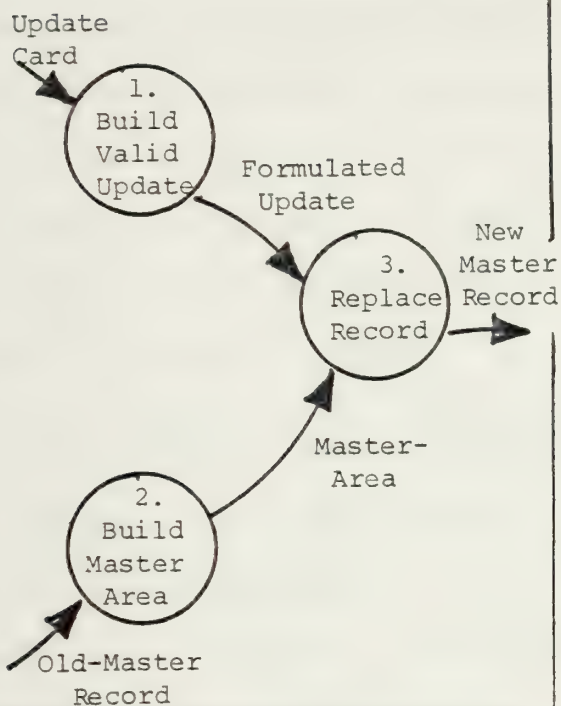


Diagram 2

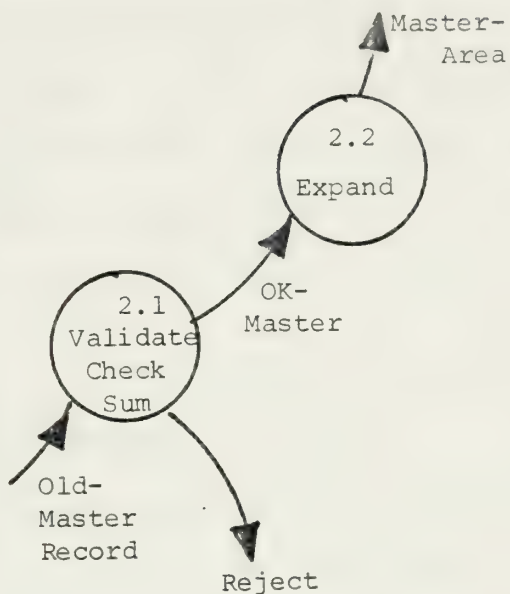


Diagram 1

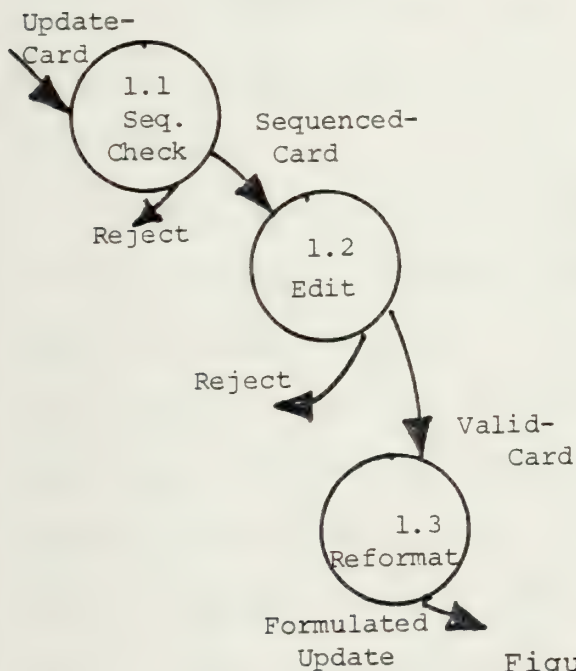


Diagram 3

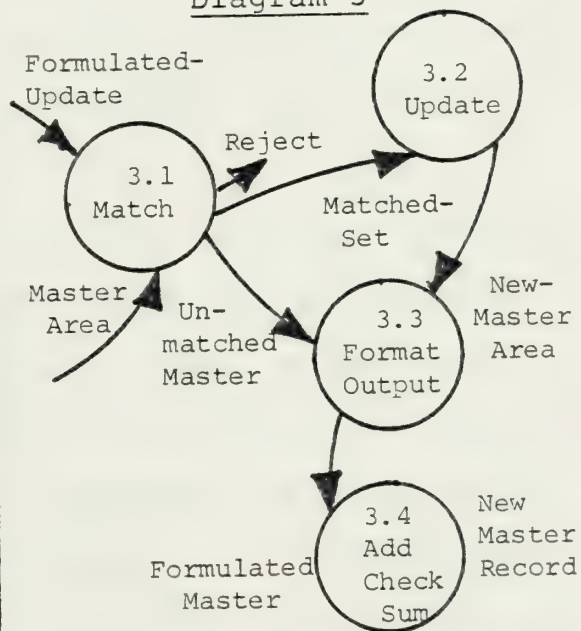


Figure 3-1

Leveled Decomposition



The principles, mechanics, and convention of the Data Flow Diagrams were outlined in the last chapter, but, as a reminder, Data Flow Diagrams are representations of packets of information flowing through a network. They are NOT a representation of a flow of control, nor do they activate any process. The process descriptions, which transform data, will be discussed in Chapter V. For now, the analysis will start at the top with the Context Diagram.

#### A. THE CONTEXT DIAGRAM FOR THE DEPARTMENT

Figure 3-2 is the Context Diagram that defines the domain of study, showing major data flows across the Department's boundary. The major sources/sinks<sup>16</sup> are all departments of the Naval Postgraduate School (NPS). No attempt was made to show the numerous ad hoc data retrievals that are necessary throughout the year to satisfy unplanned<sup>17</sup> information requirements.

Perhaps a few words on the composition of Level 0 are in order. Information about the Department's personnel resources enter the system from the northwest corner of the diagram. The Civilian Personnel Office and the Military Personnel Office introduce information about new employees and offer regular information updates about all personnel, so that the Department can verify the data in their file. Inter-action to the northeast of the Context Diagram are with the offices of the school that provide information concerning the academic requirements





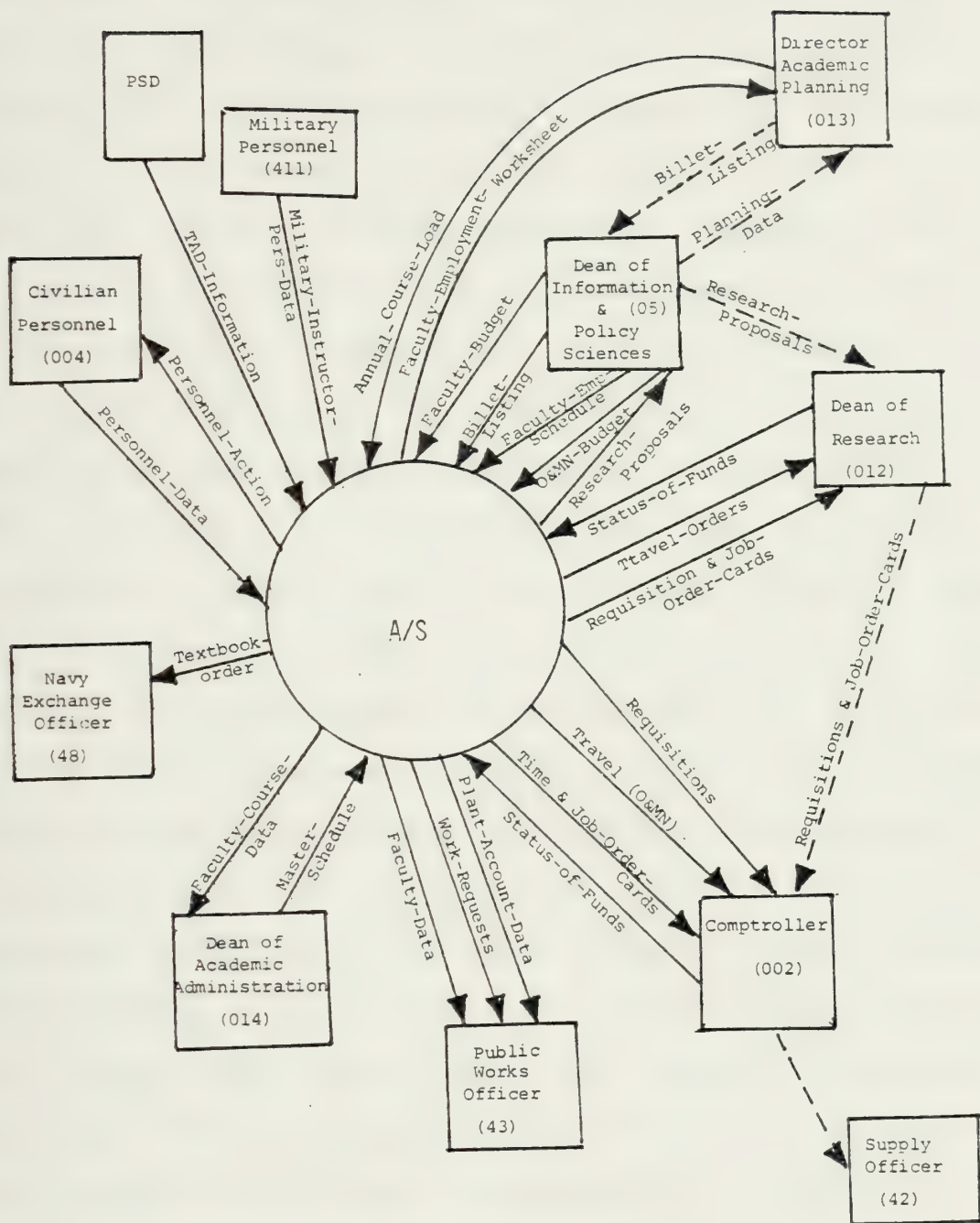


Figure 3-2  
The Context Diagram



that the Department must fulfill, both teaching and research. The Director of Academic Planning informs the Department of the courses required for the current population of military officers, and the Dean of Research lists all the research projects for which the faculty is responsible. The Comptroller and the Dean of Research, also, are the interfaces with the Department for the financial resources. These offices relay the data about the funds for which the Department must account. Rounding out the circle are the Public Works Officer who is involved with the Department's property management. As the landlord for the school's departments, the Public Works Officer who is involved with the Department's property management. As the landlord for the school's departments, the Public Works Officer keeps track of the current custodian, as well as instituting all the maintenance and repairs for all the offices and working areas. The Dean of Academic Administration performs the scheduling of the courses, classrooms, and professors, as well as other student enrollment functions; while the Navy Exchange Officer is the procurer of the Department's textbooks. Also appearing on the Context Diagram are dashed lines—these show further interaction between the external offices that will eventually affect the Department. Now that the reader has an appreciation of the Context Diagram, he can proceed with the next step of decomposing the functions.

## B. PARTITIONING<sup>18</sup> THE CONTEXT DIAGRAM

Previous chapters have discussed partitioning, or decomposing, the system into manageable abstractions from which to



continue the further break-down. This author has chosen the most straight-forward approach of designating three sub-categories:

1. personnel,
2. financial, and
3. property.

Figure 3-3 illustrates this alignment. Obviously, the categories are inter-related, or they would not be part of the same system. One cannot make some personnel decisions without a clear appreciation of the financial implications involved, nor should a financial decision be completed without weighing the property deficiencies facing the Department, both near and long-term.

However, decomposition is necessary to follow the precepts outlined above. In retrospect, it can be seen that it is the only realistic way to manage any analysis of a sizable system and to effectively keep track of any number of changes occurring during the analysis phase. The discussion proceeds to look at each section of the level one (Fig. 3-3) decomposition. Notice that the number of Data Flows and sources/sinks are the same from the Context Diagram<sup>19</sup>. The internal data flows are conceptual to the extent that they indicate a transition of management from one segment to the other. For instance, when a new employee enters the system, one must determine the financial account from which the person will be paid. The partition implies that the user transcend from the personnel "bubble" to





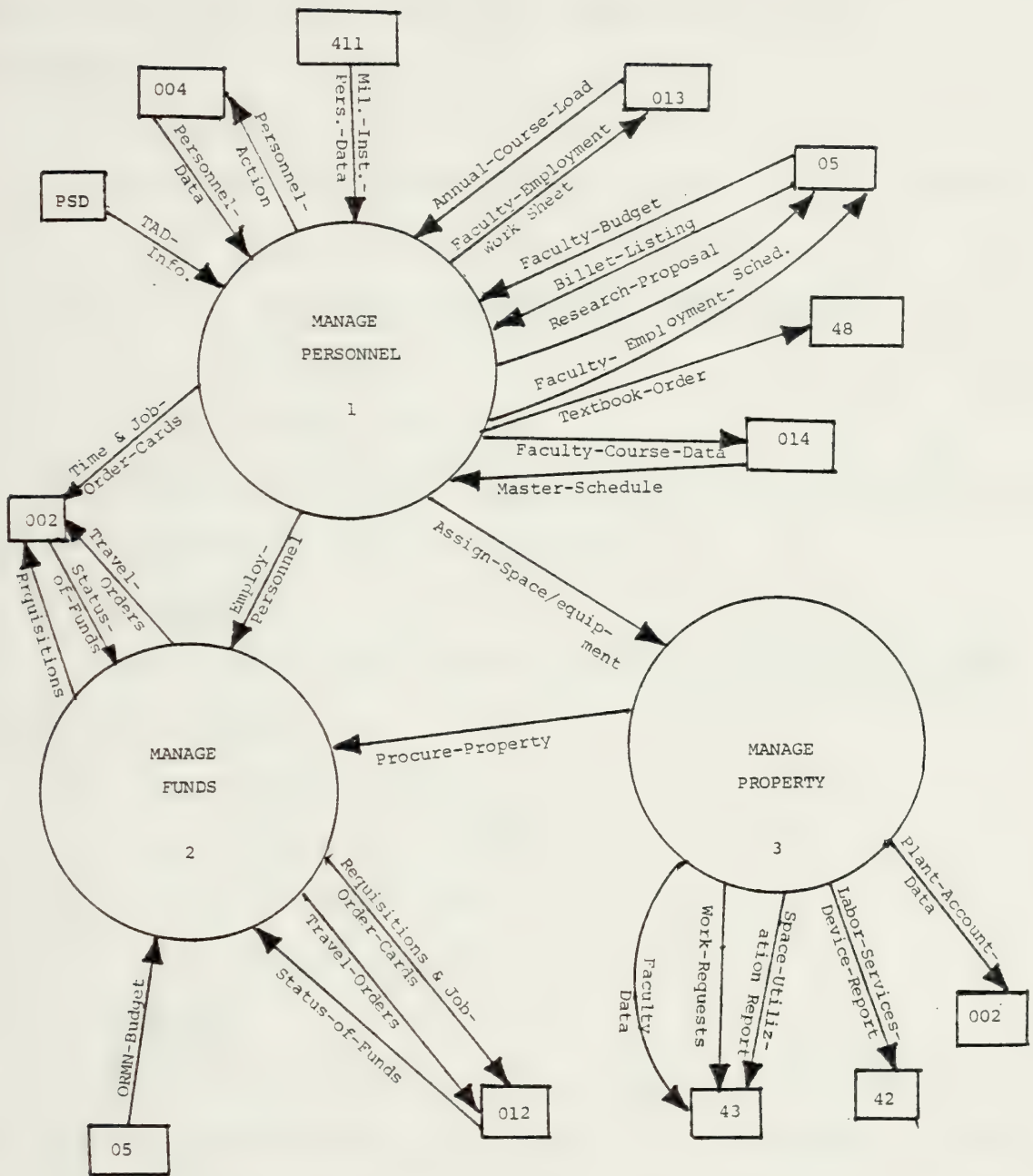


Figure 3-3  
Level One Decomposition



the financial "bubble" to determine the adequacy of funds, and then returns to the personnel "bubble" to make the assignment. Now for a look at how the three functions will be decomposed.

### 1. Personnel

Personnel management will be viewed in four phases:

- a. Updating personnel records<sup>20</sup>,
- b. Assigning personnel to work spaces,
- c. Scheduling, and
- d. Paying personnel.

For all these subdivisions, the pertinent data flow diagrams will be examined in the next chapter.

### 2. Financial

The financial management partitioning follows traditional lines also:

- a. Receive funds,
- b. Obligate funds<sup>21</sup>,
- c. Reconcile funds, and
- d. Request funds.

### 3. Property

Property management appears even more straight-forward, but with implementation, there should be a conscientious effort to conduct an inventory of furniture and equipment. It is quite clear that the Department has managed exceedingly well for years without an exact knowledge of its inventory, but it would be unfathomable to implement an automated information



system that could not tell management the location and the value of its property. It is necessary, then, to dissect this function into three parts:

- a. Acquire property<sup>22</sup>,
- b. Inventory (it), and
- c. Dispose (of it).

#### C. SUMMARY

In this chapter, the Context Diagram, Figure 3-1, was reviewed, which enabled the reader to look at the domain of the study along with the external data flows. The author followed with a description of the partitioned segments that were chosen in order to proceed to the eventual definition of the "mini"-specifications. The associated Data Flow Diagrams for the lower levels will be discussed in the following chapter.





#### IV. DATA FLOW DIAGRAMS

Data flow diagrams are the most essential part of Structured Analysis because they form the basis for the analyst and the user agreement on the conceptual framework of the system. The labels and file layouts can always be changed<sup>23</sup>, but because of the modularization, changes are not necessarily causes for exponential increases in re-design/re-programming efforts throughout. The previous chapter listed the three major partitions:

1. personnel,
2. financial, and
3. property.

Let the level two Data Flow Diagram be examined. Databases now start appearing, accessed by several processes at each level. New data flows may also start appearing if they are to be viewed as internal to the level one data flow.

##### A. LEVEL TWO DATA FLOWS

Figure 4-1 takes the personnel "bubble", number one, and creates four subsets:

1. Update personnel data—here the system takes notice of the new employee and any new personnel action that management may take.
2. Assign personnel—in this process, management concerns itself with the physical workspace of the employee.



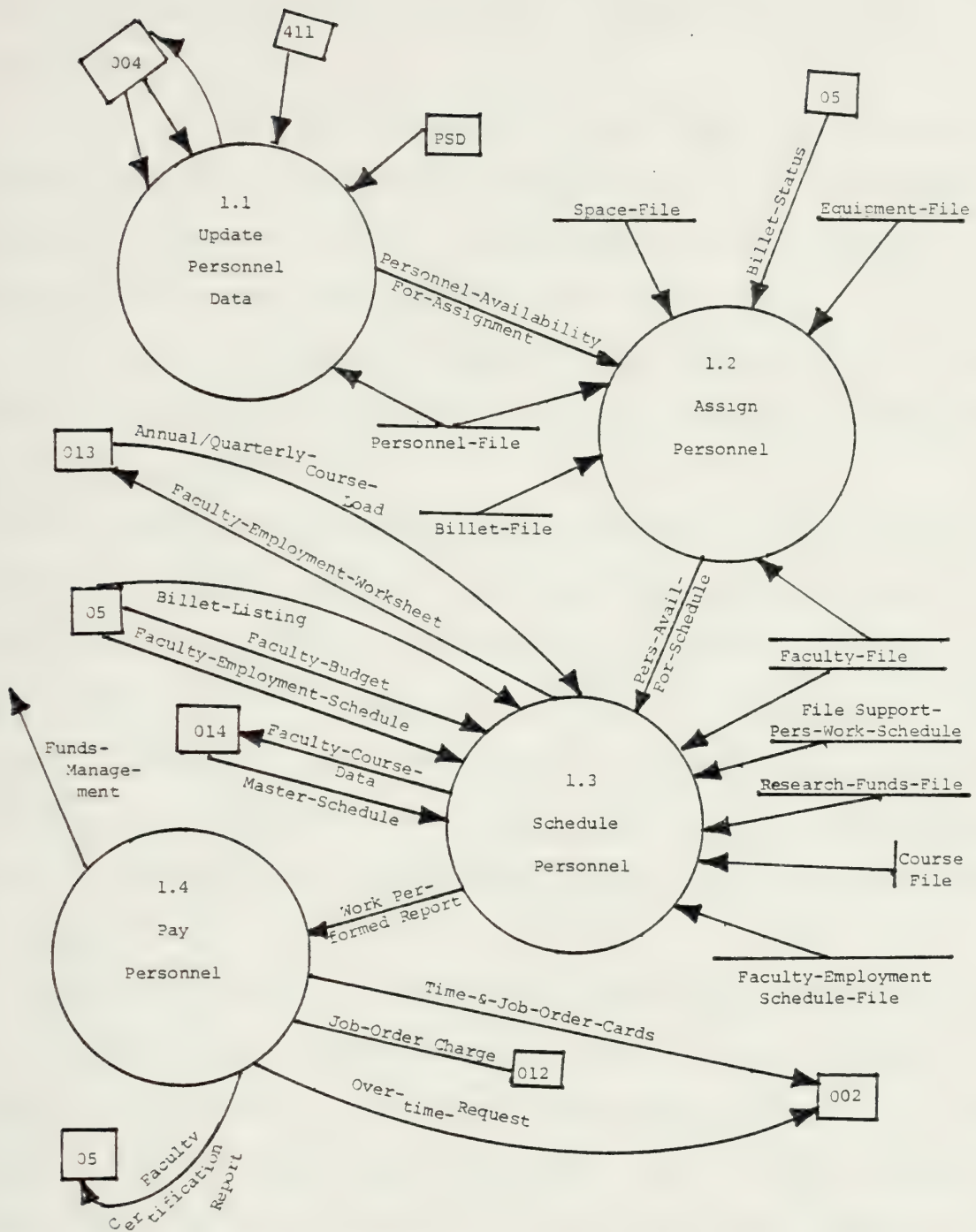


Figure 4-1  
Level 2, Process 1



Workspace assignments are made, and management concerns itself with the furniture, equipment, and telephones available for the worker.

3. Schedule personnel—at this juncture, management selects the work periods for the employee. For the staff person, it may not be too complicated; for the faculty, it is a much more complicated process for scheduling.

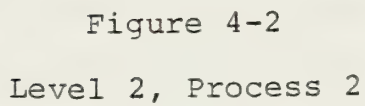
4. Pay personnel—this process concerns itself with recording successful completion of the work effort that management has assigned.

As each level is decomposed, more components are added to the picture, seemingly making the picture more complex, but in actuality, the analyst is spreading the detail. Eventually, the lowest level will contain "bubbles", or operations, that are so fundamental that they cannot be subdivided. As each operation is expanded, the analyst keeps in mind the fundamental rule of decomposition—only show on one page a limited number of tasks<sup>24</sup>.

Figure 4-2 takes "bubble" number two and gives us three new, re-numbered processes for the financial management process. New files are shown, and some new internal data flows are added. Most of these are conceptual. For instance, after the funds are received, Process 2.1, the Data Flow Diagram shows a data flow, "Expenditure Request." The data flow here is really some section of management telling a clerk to procure something. In a very large organization, this action could very









well take the form of a piece of paper moving from one desk to another. In the Department, it is more likely to be an informal communication.

The property management process is shown in its partitioned state in Figure 4-3. As the reader can readily see, most of the processes are still conceptual in nature. The functional primitives are, for the most part, left to succeeding levels.

#### B. LEVEL THREE DATA FLOWS

Level three data diagrams show considerable less complexity and less detail per process bubble. Each of the processes, except for one, will map directly to a functional primitive in the data dictionary. Figure 4-1, the personnel process, converts into four lower diagrams, Figures 4-4 through 4-7, respectively. Figure 4-2, the financial process, however, only needs to sub-divide two processes, "bubble" 2.3, reconcile funds and 2.4, request funds. This is shown in Figure 4-8 and Figure 4-9. Only one decomposition of the property segment is required. Figure 4-10 is the partitioning of process 3.2, inventory property.

#### C. LEVEL FOUR DATA FLOWS

There is only one decomposition to the fourth level, Figure 4-11, and that is from process 1.1.2—AMPLIFY PERSONNEL DATA. This takes the form of verifying the data in the PERSONNEL-FILE from the periodic personnel listing from the Civilian Personnel Office. From this junction, two other personnel tasks can occur:



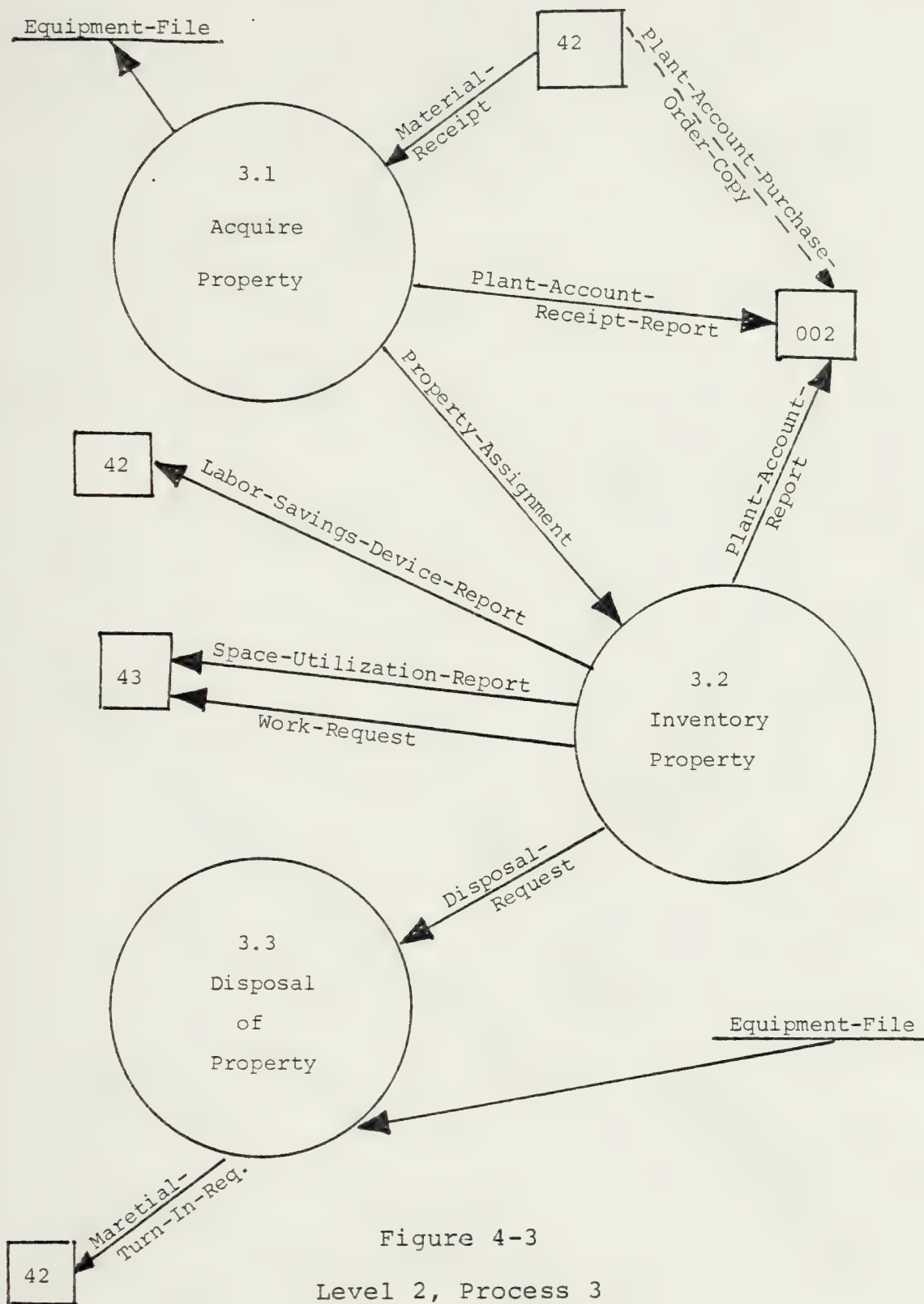


Figure 4-3  
Level 2, Process 3





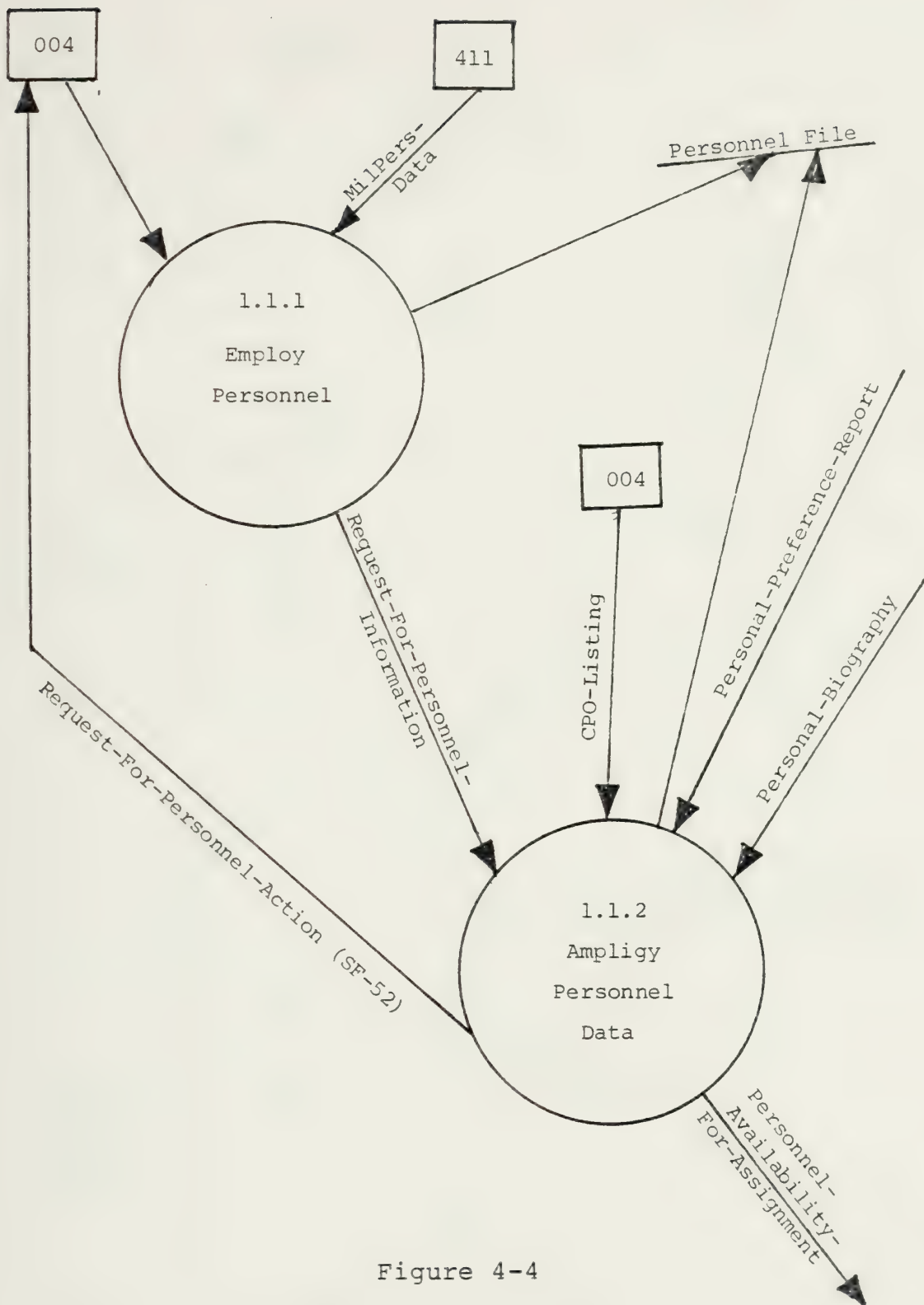


Figure 4-4  
Level 3, Process 1.1



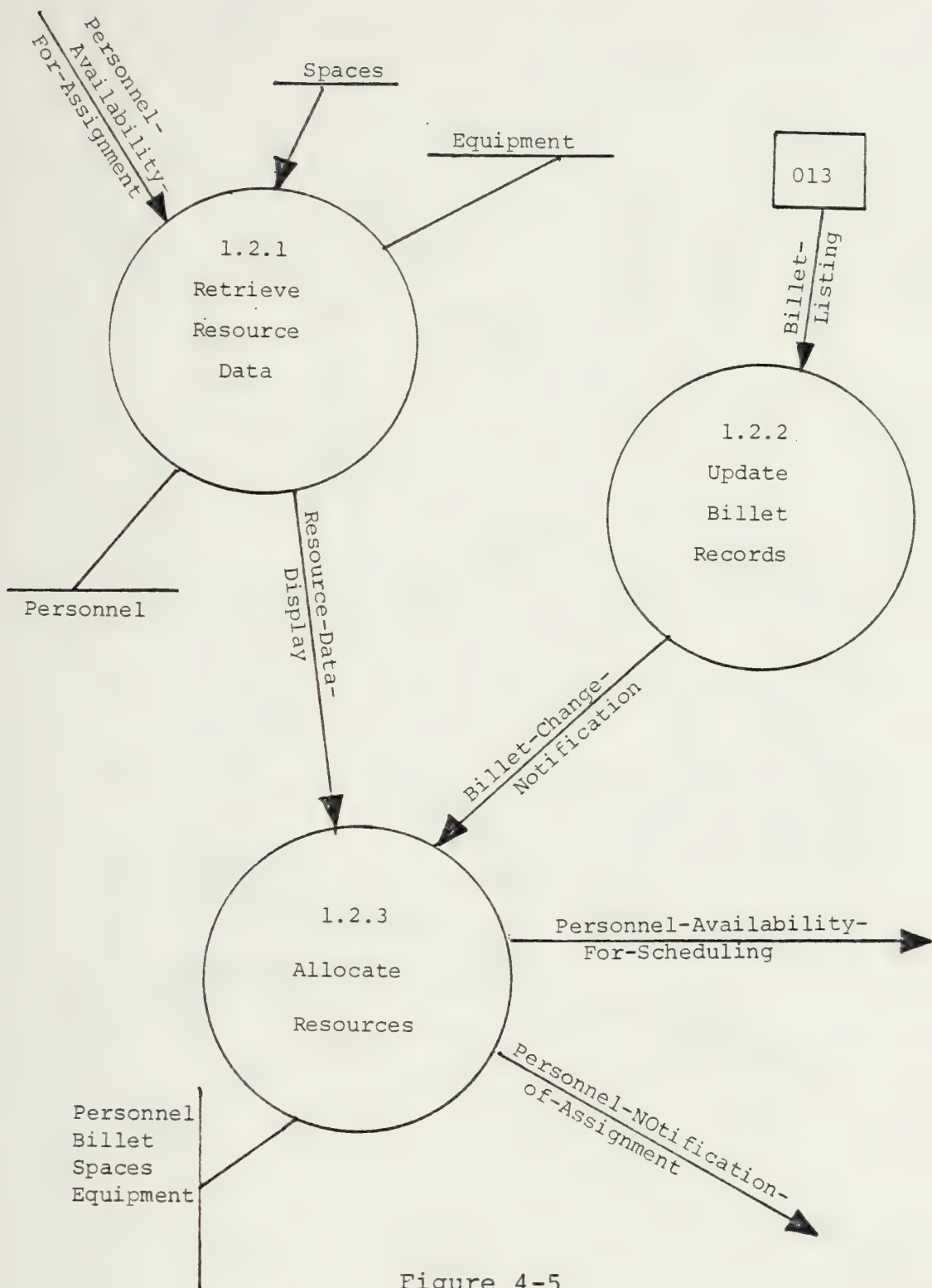


Figure 4-5  
Level 3, Process 1.2



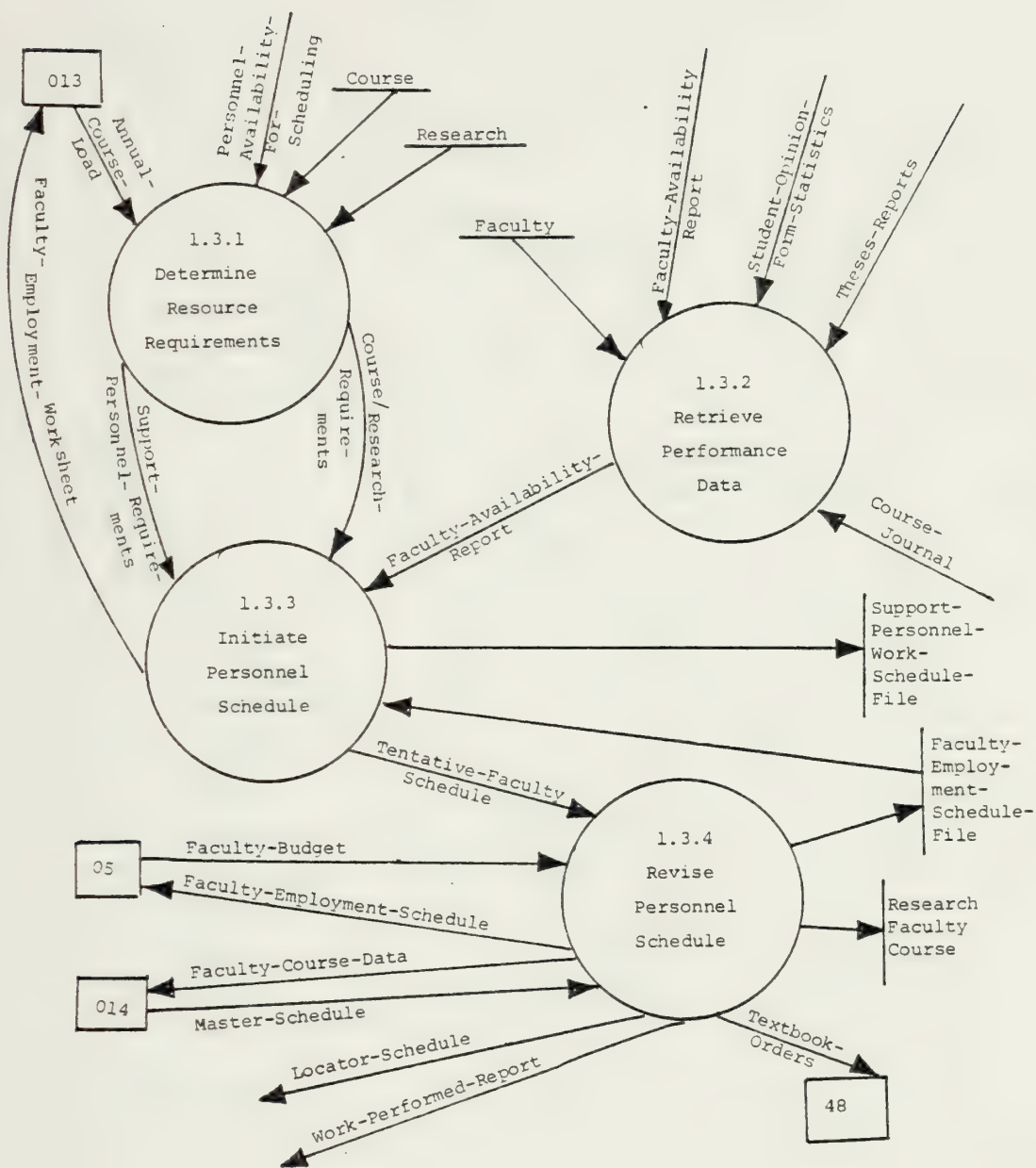


Figure 4-6  
Level 3, Process 1.3





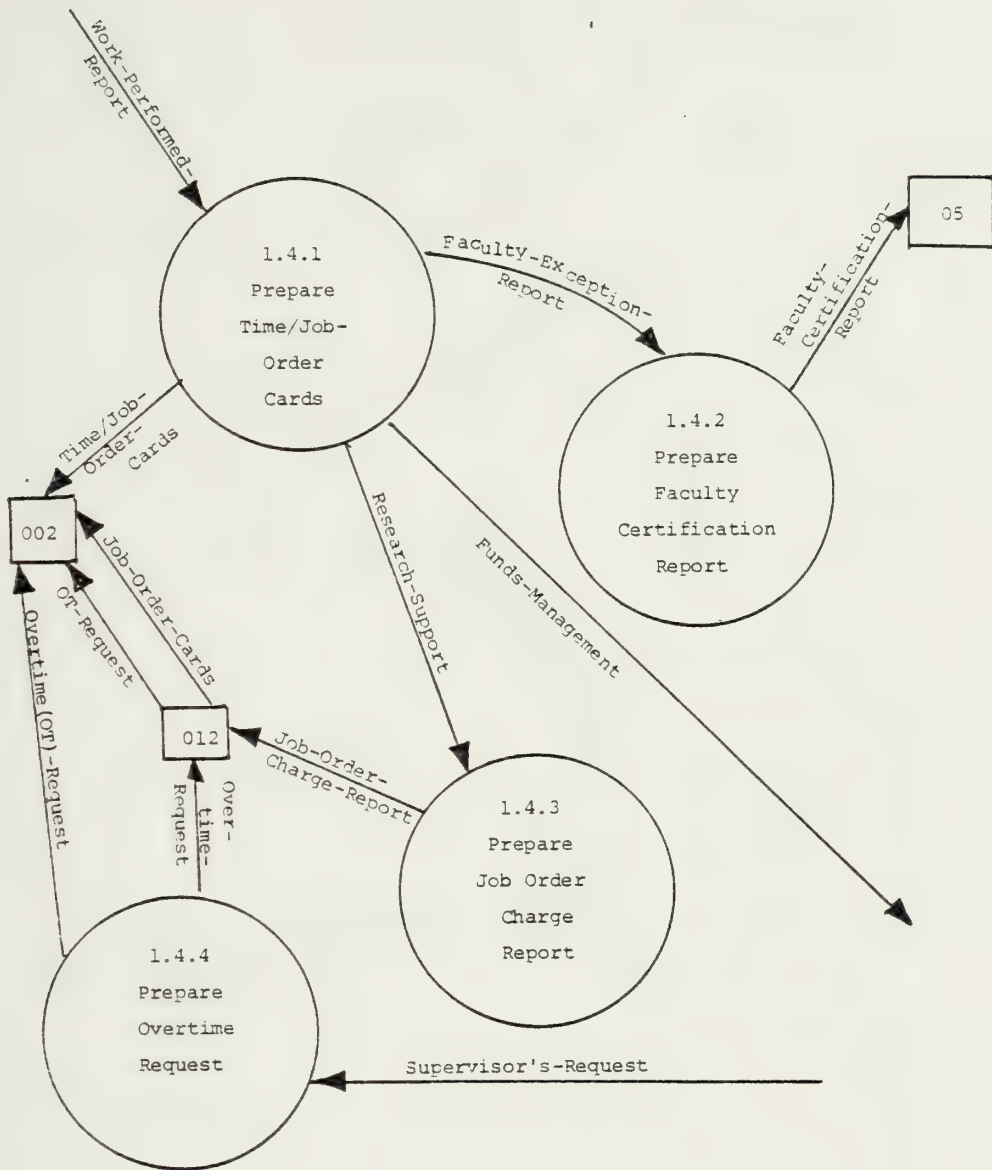


Figure 4-7  
Level 3, Process 1.4



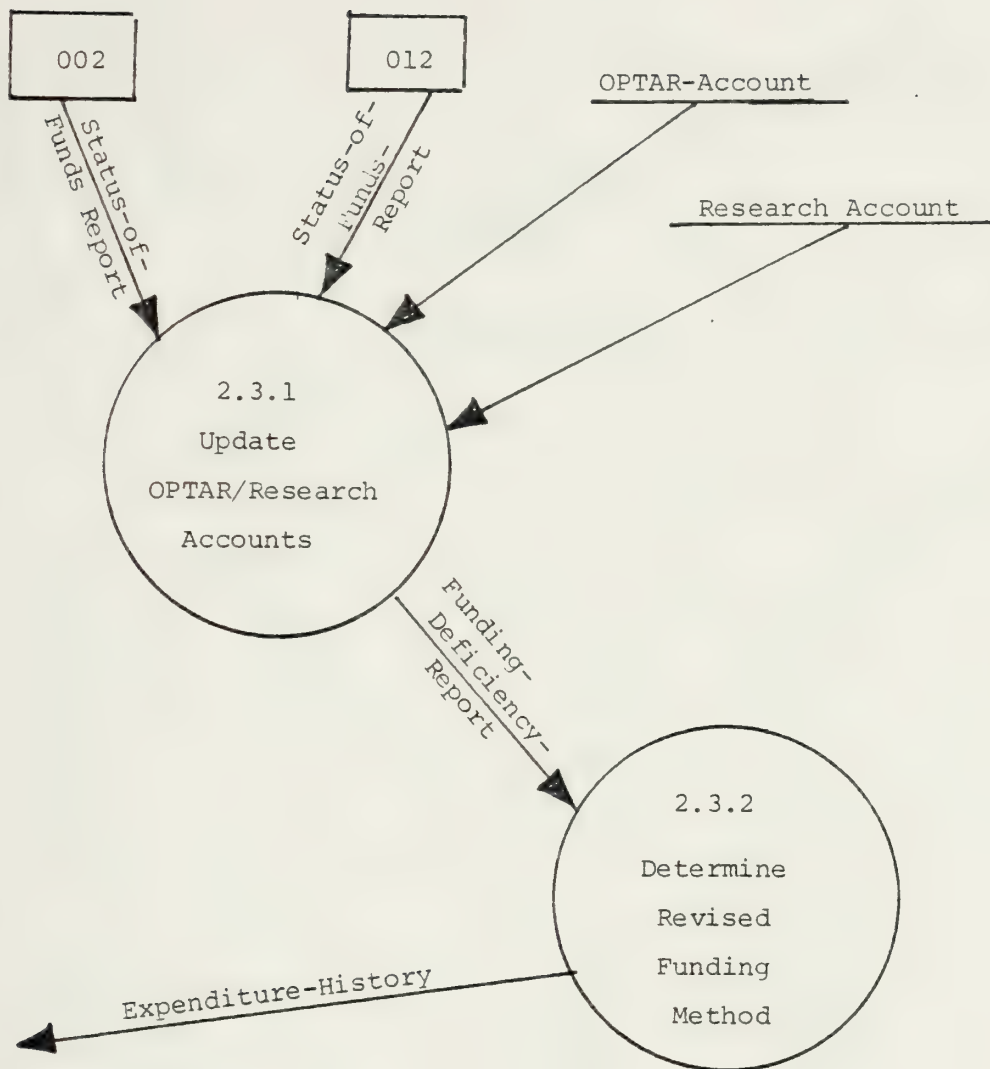


Figure 4-8  
Level 3, Process 2.3



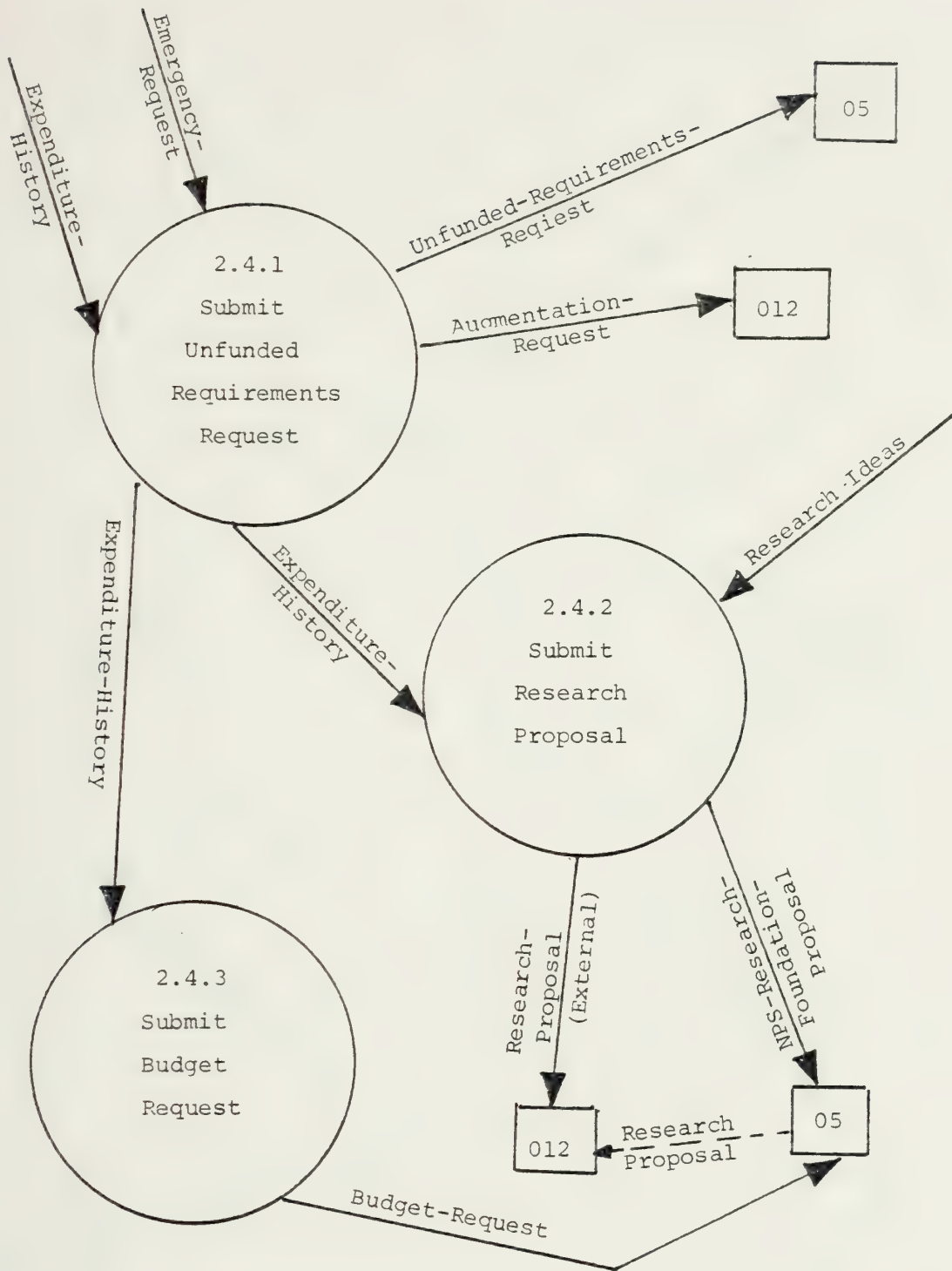


Figure 4-9  
Level 3, Process 2.4



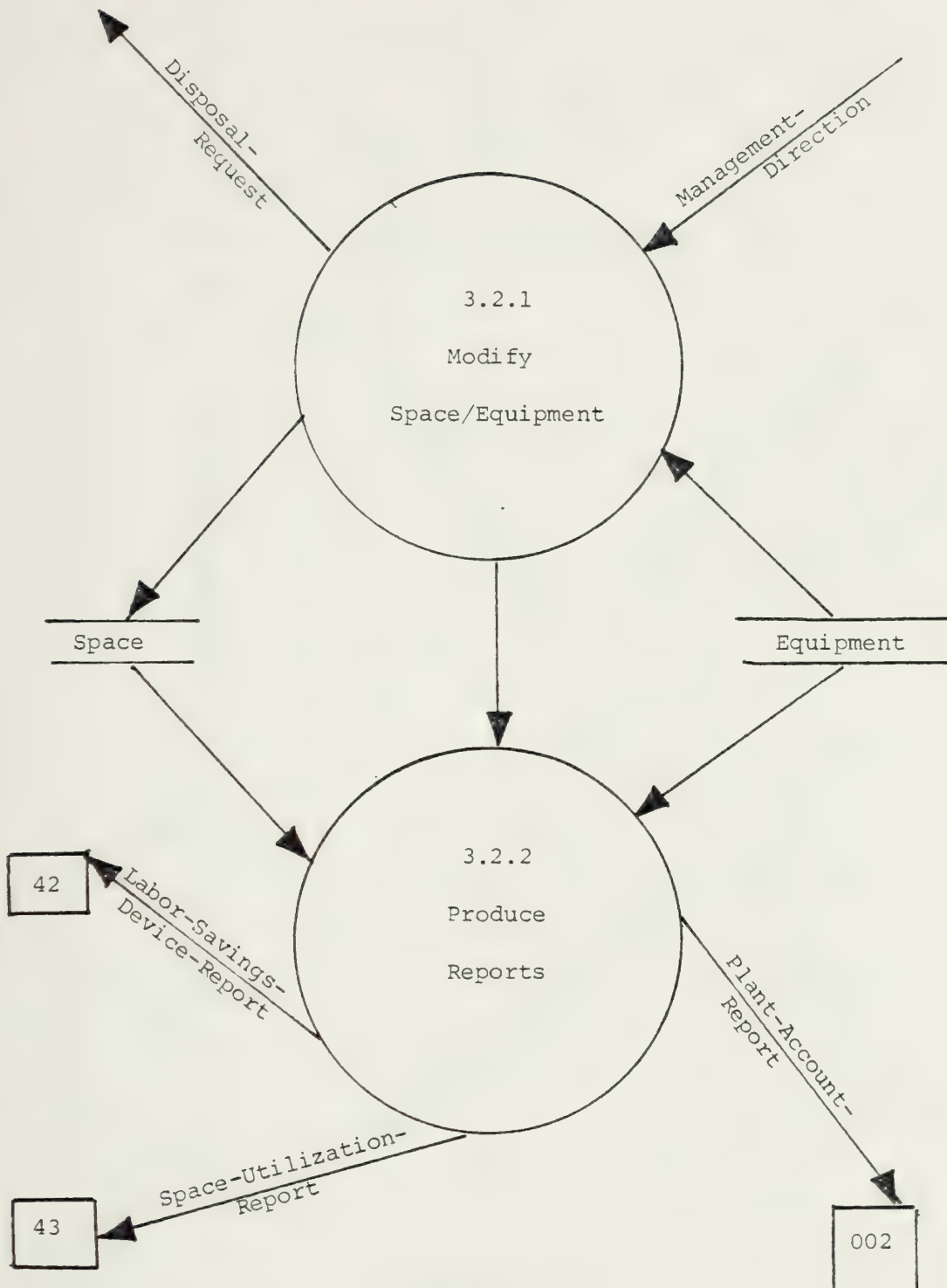


Figure 4-10  
Level 3, Process 3.2





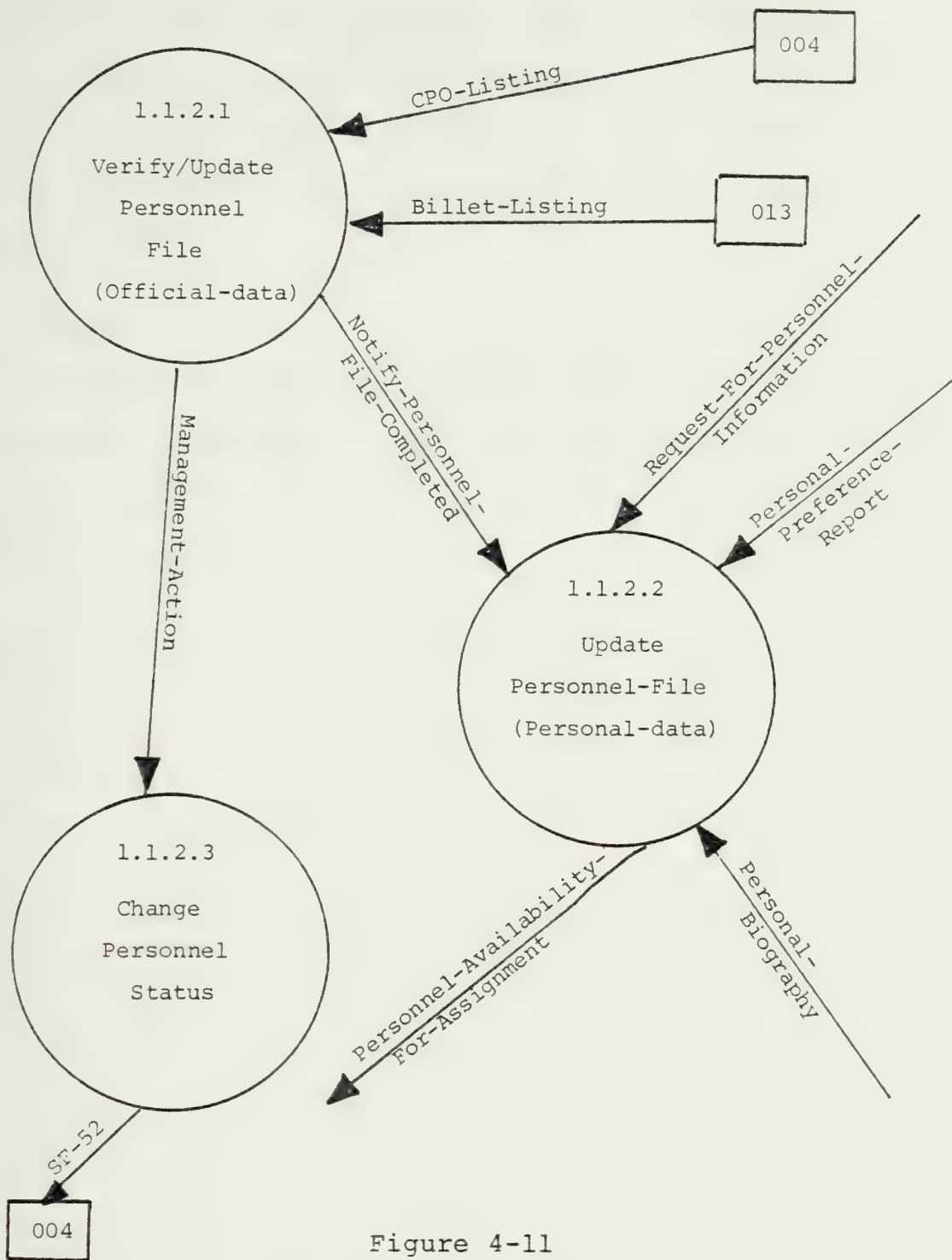


Figure 4-11  
Level 4, Process 1.1.2



1. Management may decide that some other personnel-management action needs to occur, i.e., promotion, or re-assignment. Process 1.1.2.3 shows this evolution.

2. Supplementary information concerning the employee may be available, at this juncture, in order to update the personnel record.

#### D. SUMMARY

The data flow diagrams were discussed briefly in this chapter and displayed in Figures 4-1 through 4-11. They are self-explanatory, but will also be included in the data dictionary, Appendix A.



## V. DATA DICTIONARY

The Data Dictionary, Appendix A, is a compendium of this study that can stand alone as a working document after the system designer has digested the essence of this narrative. It is also intended to be used as a desk guide for the user after implementation. As such, it should not be considered static, but be updated regularly as new requirements, or enhancements, come to light. DeMarco's Data Dictionary consists of:

1. data flow definitions,
2. data element definitions,
3. file/database descriptions<sup>25</sup>, and
4. process descriptions.

For continuity purposes, the author has included the Data Flow Diagrams and the Data Structure Diagram in the dictionary. These two should be updated during implementation since the entire package can be used as an excellent training manual even before a user touches a keyboard.

Before the examples of the content of the Data Dictionary are explored, some definitions and conventions<sup>26</sup> need to be reviewed:

### Definitions:

DATA FLOW is a pipeline through which packets of information flow.

FILE is a time-delayed repository of data.





PROCESS is a transformation of incoming data flows(s) into outgoing flow(s).

DATA ELEMENT is a subset of a data flow. It may be subdivided into sub-elements, which are also defined as elements in their own right.

### Relational Operators

#### Functional Operators

Sequence—the concatenation of two or more components in order.

Selection—the choice of one of two or more possibilities.

Iteration—the repetition of a designated component from zero to infinity (limits may be shown as sub/superscripts).

Optional—zero or one iteration of a component.

#### Constructs

<u>Function</u>	<u>Structured English</u>	<u>Notation</u>
Sequence	1. is equivalent to	=
	2. and	+
Selection	either-or	[ ]
Iteration	iterations of	{ }
Optional	optional	( )
Comments	amplification	*comment*



## A. DATA FLOW DEFINITIONS

There should be one Data Flow Definition for each arrow on each Data Flow Diagram. Some arrows in this study were conceptual flows, but are included for continuity purposes. Implementation may actually produce a flow of some sort.

Figure 5-1, FACULTY-CERTIFICATION-REPORT, and Figure 5-2, FACULTY-COURSE-DATA, are examples of Data Flow Definitions. Each data element number<sup>27</sup> is shown also. The notes portion of the recommended form may list the source, destination, and reference of the data flow.

## B. DATA ELEMENT DEFINITIONS

There should be one Data Element Definition for each element shown on a Data Flow Definition, but this too may be relaxed. The only data elements required, in the opinion of this author, are the ones that are to be included in file descriptions.

Figure 5-3, BIO-DATA, Figure 5-4, CATEGORY-CODE, and Figure 5-5, PROF-NAME, are all examples of Data Element Definitions. Names that are obvious are listed as Self-Defining (S.D.). The notes portion of the form should indicate the data flows and files of which the elements are a member<sup>28</sup>.

## C. FILE DESCRIPTIONS

This study recommends only 12 files. It is the author's contention that this arrangement minimizes redundancy of data elements in the files, but allows for extreme flexibility for ad hoc retrievals.



DATA FLOW NAME: FACULTY-CERTIFICATION-REPORT

ALIASES: CIVILIAN-FACULTY-EMPLOYMENT-CERTIFICATE

COMPOSITION:

= 1 { FACULTY + BI-WEEKLY-PERIOD } N

N = number of faculty

NOTES:

PROCESSES: 1, 1.4, 1.4.2

Report only shows changes from the  
faculty employment schedule, i.e., sick and annual  
leave, travel, leave without pay.

Figure 5-1

Faculty-Certification-Report



DATA FLOW NAME:	FACULTY-COURSE-DATA
ALIASES:	
COMPOSITION:	<p>= { COURSE-NUMBER + COURSE-NAME + 1{PROF-NAME}S + NO-SEGMENTS</p> <p>S = number of segments</p>
NOTES:	<p>PROCESSES: 1, 1.3, 1.3.4</p> <p>Report is made by annotating the quarterly course load report and sending it to the scheduler.</p>

Figure 5-2

Faculty-Course-Data





DATA ELEMENT NAME:    BIO-DATA
ALIASES:
ASSIGNED BY:
VALUES AND MEANINGS:  + (MARITAL-STATUS) + (ADDRESS) + (TELEPHONE-NUMBER) + ( <u>BIRTHDATE</u> ) + (BIRTHPLACE)
NOTES:  FILE:    PERSONNEL  DATA FLOW:  SUBSET OF DATA ELEMENT(S):  <u>PRIMARY KEY</u> or <u>SECONDARY KEY</u>

Figure 5-3

BIO-Data



DATA ELEMENT NAME:

CATEGORY-CODE

ALIASES:

VALUES AND MEANINGS:

BK	BOOK PURCHASE
CE	SUPPORT SALARY ON CONTINUING EDUCATION SHORT COURSES
CH	RESEARCH CHAIR SALARY
CR	CLAIM FOR REIMBURSEMENT
EQ	EQUIPMENT (PLANT ACCOUNT>\$1000
FA	FACULTY SALARY DURING ACADEMIC YEAR
FC	FACULTY SALARY FOR CONTINUING EDUCATION
FI	FACULTY SALARY DURING INTERSESSIONAL
FO	FACULTY SALARY WHEN OFF CAMPUS
FR	FUNDS RECEIVED(MAIN ACCOUNT FUNDS)
FT	FUNDS TRANSFER TO AGENCY OUTSIDE NPS
HR	HONORARIUM
IC	INDIRECT COSTS
MC	MAINTENANCE CONTRACTS
MP	MINOR PROPERTY (EQUIPMENT<#1000)
MS	MISCELLANEOUS
PR	PRINTING AND REPRODUCTION COSTS
PU	PUBLICATION CHARGES
SC	SUPPORT SERVICES CONTRACTS
SM	SUBSCRIPTIONS TO MAGAZINES
SO	SUPPORT CONTRACTS WITH SUPPLY OFFICE
SS	SUPPORT SALARY
SU	SUPPLIES
TB	TELEPHONE BILLS
TD	TRAVEL DOMESTIC (U.S. AND CANADA)
TO	TRAVEL OVERSEAS
TR	TRANSFER RESPONSIBILITY (SUBSIDIARY ACCOUNT FUNDS)
TY	TYPING SERVICES OUTSIDE NPS

NOTES:

FILE:OPTAR AND RESEARCH

DATA FLOW:

SUBSET OF DATA ELEMENT(S):

PRIMARY KEY or SECONDARY KEY

Figure 5-4  
Category-Code



DATA ELEMENT NAME: PROF

ALIASES: PROFESSOR, PROF-NAME

ASSIGNED BY: DEPARTMENT

VALUES AND MEANINGS:

MASTER SCHEDULE

PROF = CODE + NAME + DEPARTMENT

<u>CODE</u>	<u>NAME</u>	<u>DEPARTMENT</u>
Bi	CDR BISHOP	AS
Bk	PROF BOGER	AS
Rh	PROF RICHARDS	OR

NOTES:

FILE:COURSE

DATA FLOW: MASTER SCHEDULE

SUBSET OF DATA ELEMENT(S):EMPLOYEE-DATA

PRIMARY KEY or SECONDARY KEY

Figure 5-5

Prof





Figure 5-6, COURSE, Figure 5-7, EQUIPMENT, and Figure 5-8, FACULTY, are examples of File Descriptions. Primary keys are underlined and secondary keys are shown with dashes, i.e. \_\_\_\_.

#### D. PROCESS DESCRIPTIONS

Process Descriptions are only able to be described for functional primitives, the lowest "bubbles" of the Data Flow Diagrams. Structured English, Decision Tables, or Decision Trees may be used. This approach will minimize mis-interpretation when actually implementing.

Figure 5-9, ACQUIRE-PROPERTY, Process 3.1, is an example of a Process Description.



FILE/DATABASE NAME:	COURSE
ALIASES:	CATALOG
COMPOSITION:	
<u>COURSE-NUMBER</u> + <u>COURSE-NAME</u> + CREDIT-HOURS + <u>QUARTER-OFFERED</u> + <u>COURSE-CO-ORDINATOR</u> + ( PROF + AY-QTR ) + (REMARKS)	
ORGANIZATION:	DIRECT ACCESS
NOTES:	
<u>PRIMARY KEY</u> <u>SECONDARY KEYS</u>	

Figure 5-6

Course



FILE/DATABASE NAME: EQUIPMENT

ALIASES:

COMPOSITION:

PLANT-ACCOUNT-NUMBER + NOMENCLATURE + MAKE/MODEL  
+ SERIAL-NUMBER + NSN + U/P + PURCHASE-ORDER-NO +  
YEAR-ACQUIRED + LOCATION + (REMARKS)

ORGANIZATION: DIRECT ACCESS

NOTES:

PRIMARY KEY

SECONDARY KEYS

Plant account number field may be used to insert an A/S department numbering system, i.e., D1, C1, for non-accountable furniture, such as desks and chairs. The plant account report calls for quantity of equipment per location, but this would be superfluous in this file since there would be only one record per piece of equipment.

Figure 5-7

Equipment



FILE/DATABASE NAME: FACULTY

ALIASES:

COMPOSITION:

1 { EMPLOYEE-NUMBER + ACADEMIC-DISCIPLINE + RANK +  
TENURE + FACULTY-INITIAL-RANK + FACULTY-APPOINT-  
MENTS-CURRENT-RANK + FACULTY-YEARS-OF-EXPERIENCE +  
{ COURSE-HISTORY } + { COURSE-REQUESTED } +  
{ THESIS } + { PUBLISHING } + { PROFESSIONAL } +  
{ PREVIOUS-ACADEMIC-ASSIGNMENTS } + { COURSE/LABOR-  
ATORY-DEVELOPMENT } + { CONTINUING-EDUCATION-ACTIVITY }  
+ { SELF-IMPROVEMENT-EFFORTS } + PLANS-FOR-198X +  
{ RESEARCH-AREA } + { COSTC }

ORGANIZATION: DIRECT ACCESS

NOTES: NF = number of faculty.

PRIMARY KEY

SECONDARY KEYS are also within COURSE-HISTORY,  
THESIS, PUBLISHING, PROFESSIONAL, AND PREVIOUS-ACADEMIC-  
ASSIGNMENTS.

Figure 5-8

Faculty





PROCESS NAME: ACQUIRE PROPERTY

PROCESS NUMBER: 3.1

PROCESS DESCRIPTION:

FOR EACH MATERIAL-RECEIPT-DOCUMENT

VERIFY THAT PROPERTY was requisitioned by DEPT

VERIFY that document data EQUALS PROPERTY

IF DISCREPANCY exists NOTIFY supply department

OTHERWISE

IF PROPERTY EQUALS EQUIPMENT

BUILD EQUIPMENT-FILE record

ASSIGN LOCATION

IF EQUIPMENT has PLANT-ACCOUNT-NO

NOTIFY comptroller department

MOVE EQUIPMENT to LOCATION

IF PROPERTY EQUALS SUPPLIES

ACCESS SUPPLIES-FILE

INCREMENT DEMAND(56) by QUANTITY  
received

MOVE SUPPLIES to the vault

IF PROPERTY EQUALS DIRECT-TURNOVER(DTO)

MOVE DTO to PROF

IN ANY CASE

ACCESS OPTAR/RESEARCH-ACCOUNT-FILE

STATUS = "RECEIVED"+DATE

FILE MATERIAL-RECEIPT-DOCUMENT

Figure 5-9  
Acquire Property



## VI. LOGICAL FILE STRUCTURES

Chapter Five showed the reader an example of a database/file, but how should the analyst consider the set of files that are required to support a system? Obviously, redundant information in a database/file<sup>29</sup> is expensive, and the expected approach would be to minimize redundancy, wherever possible. However, complex information requirements necessitate complex file structures and, therefore, some redundancy may be expected.

The first approach an analyst takes in designing a file structure is to segregate related data elements by logical function, i.e., room-number, square-feet, telephone-number can be part of a building file. The mechanics of a complex file structure, i.e., pointers, links, stacks versus a data base processor can be deferred until the design/implementation phase. Once the individual files are constructed, the analyst needs to describe a multi-dimensional representation of the data base structures in the form of a Data Structure Diagram [Ref. 18].

The global view of a data structure is called a schema. Figure 6-1 is the schema for the Department's Logical Data Structure. If the designer implements a restricted view of the file structure for a specific user, i.e., the Assistant



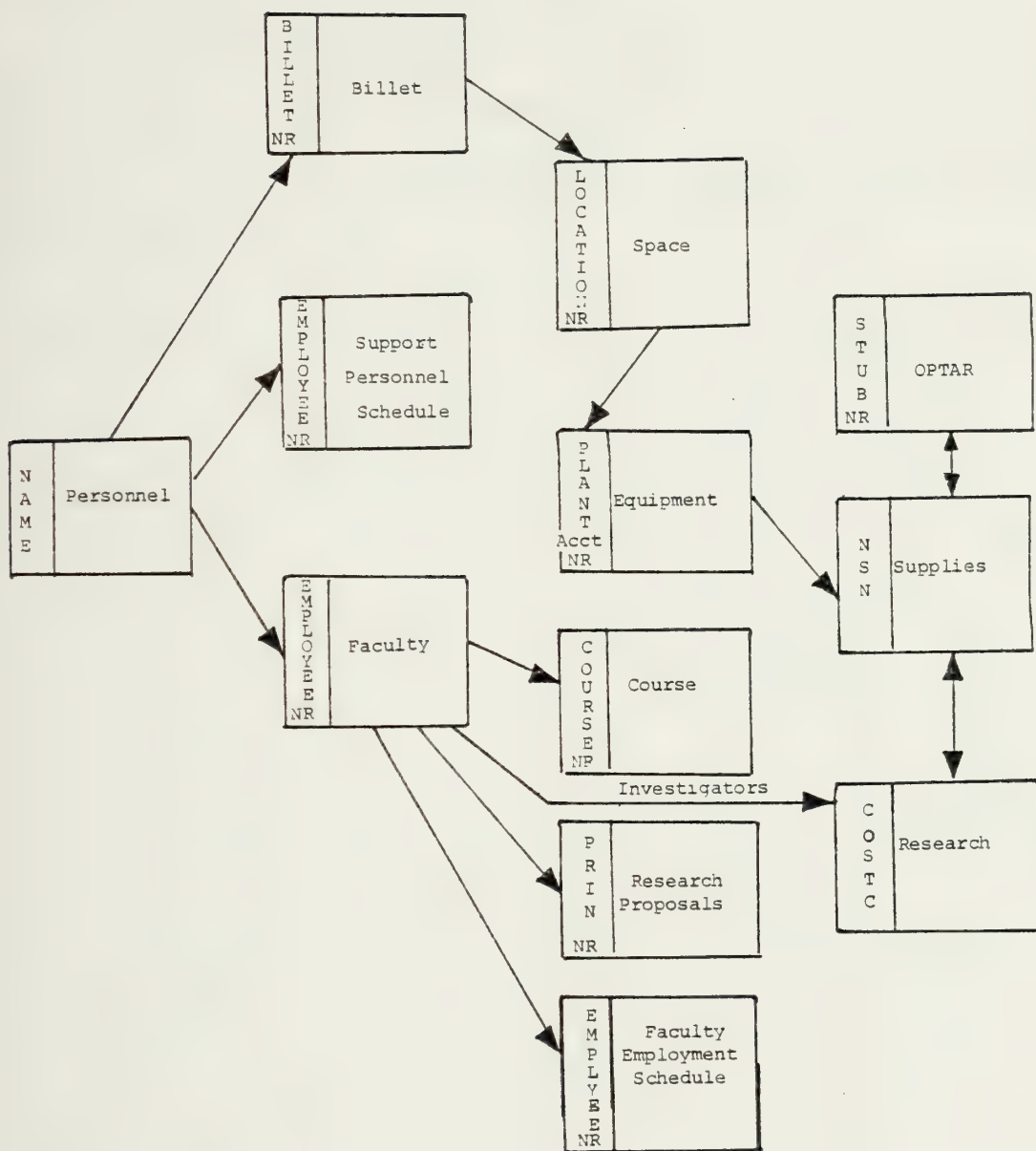


Figure 6-1  
Data Structure Diagram





Chairman for Research, the resultant private model of the data structure is called a subschema [Ref. 19]. There is no subschema design at this time.

This chapter has reviewed the global file structure for the Department. The next chapter will make some observations about the study and offer some recommendations for the future implementation.



## VII. OBSERVATIONS AND RECOMMENDATIONS

During the course of this study, this author gained tremendous insight to the complexity of the management function of the Department. Its diversity is fascinating, but the opportunity for increased productivity is ever-present. Anything that can minimize the tedious nature of its information management function, the more the department and the educational mission it serves will benefit. This author will make some observations and offer some suggestions.

### A. OBSERVATIONS

1. The Department is a "going concern" and is able to fulfill its mission in its present state without automation of the information function.

2. Automation should proceed slowly with this study as a framework.

3. Automation of a function, i.e., the Supplies file, should be considered experimental for a reasonable time period, i.e., six months, for instance, until its benefit can really be determined.

4. An integrated data base should be the goal of the entire school, so that data need be entered and maintained only once. Re-entry at individual work centers, i.e., the Department, is expensive and error-prone.



## B. RECOMMENDATIONS

1. The design/implementation task should be suggested to the CSM, September, 1984, graduates, as a proposed thesis topic. The documentation, much like the data dictionary, should be considered sufficient for the thesis.

2. The Department should assign, and incorporate in the position description, as a data base administrator a member of the support staff. It should not be a hands-on user nor a member of the faculty.

3. The methodology, recommended by DeMarco, should be "exported" to the rest of N.P.S. for eventual integration of the information system and to serve as the basis for Task Analyses to determine staffing requirements.



APPENDIX A  
DATA DICTIONARY

No.	DATA FLOW NAMES
1	ANNUAL/QUARTERLY-COURSE-LOAD
2	AUGMENTATION-REQUEST
3	BILLET-CHANGE-NOTIFICATION
4	BILLET-LISTING
5	BUDGET-REQUEST
6	COURSE-JOURNAL
7	COURSE/RESEARCH-REQUIREMENTS
8	CPO-LISING (CURRENT)
9	CPO-LISTING (PROPOSED)
10	DISPOSAL-REQUEST
11	EMERGENCY-REQUEST
12	EXPENDITURE-HISTORY
13	EXPENDITURE-REQUEST
14	FACULTY-ACTIVITY-REPORT
15	FACULTY-AVAILABILITY-REPORT
16	FACULTY-BUDGET
17	FACULTY-CERTIFICATION-REPORT
18	FACULTY-COURSE-DATA
19	FACULTY-EMPLOYMENT-SCHEDULE
20	FACULTY-EMPLOYMENT-WORKSHEET
21	FACULTY-EXCEPTION-REPORT
22	FUNDING-DEFICIENCY-REPORT
23	INQUIRY-RESPONSE
24	JOB-ORDER-CARD
25	JOB-ORDER-CHARGES
26	LABOR-SAVINGS-DEVICE-REPORT
27	LOCATOR-SCHEDULE
28	MANAGEMENT-ACTION





No.	DATA FLOW NAMES
29	MANAGEMENT-DIRECTION
30	MASTER-SCHEDULE
31	MATERIAL-RECEIPT
32	MATERIAL-TURN-IN-REQUEST
33	MILITARY-INSTRUCTORS-PERSONNEL-DATA
34	NOTIFICATION-OF-PERSONNEL-ACTION
35	NOTIFICATION-OF-COMPLETION-OF-PERSONNEL-FILE
36	OPTAR-GRANT (O &MN)
37	OVERTIME-REQUEST
38	PERS-AVAILABILITY-FOR-SCHEDULING
39	PERSONAL-BIOGRAPHY
40	PERSONAL-PREFERENCE-REPORT
41	PERSONNEL-AVAILABILITY-FOR-ASSIGNMENT
42	PERSONNEL-NOTIFICATION-OF-ASSIGNMENT
43	PLANT-ACCOUNT-RECEIPT-REPORT
44	PLANT-ACCOUNT-REPORT
45	PROPERTY-ASSIGNMENT
46	READY-SUPPLY-STORE-REQUEST
47	REQUEST-FOR-PERSONNEL-ACTION
48	REQUEST-FOR-PERSONNEL-INFORMATION
49	REQUISITIONS
50	RESEARCH-IDEA
51	RESEARCH-PROPOSAL
52	RESEARCH-SUPPORT
53	RESOURCE-DATA-DISPLAY
54	SOF-DATA
55	SPACE-UTILIZATION-REPORT
56	STATUS-OF-FUNDS-REPORT
57	SUPERVISORS-REQUEST
58	SUPPORT-PERSONNEL-REQUIREMENT
59	TENTATIVE-FACULTY-SCHEDULE
60	TEXTBOOK-ORDER
61	THESIS-REPORTS



No.	DATA FLOW NAMES
62	TIME-CARDS
63	TRAVEL-MATTER-INQUIRES
64	TRAVEL-ORDERS
65	UNFUNDED-REQUIREMENTS
66	WORK-PERFORMED-REPORT
67	WORK-REQUEST



-----  
DATA FLOW NAME: ANNUAL/QUARTERLY-COURSE-LOAD  
-----

ALIASES: ACADEMIC-DEPARTMENT-CHAIRMAN-REPORT  
-----

COMPOSITION:

ANNUAL = { COURSE-NUMBER + CREDIT-HOURS + { NO-STU +  
SECTION + FAC-HRS } 4 }

QUARTERLY = { COURSE-NUMBER + CREDIT-HOURS + SECTION +  
NO-STU + CURRICULUM-DEGREE + 1 {  
STUDENT-NAME} N + NO-STU

N = no students

-----  
NOTES:

PROCESSES:

1

1.3



-----  
DATA FLOW NAME:

AUGMENTATION-REQUEST  
-----

ALIASES:

-----

COMPOSITION:

Non-formatted request to the dean of research for  
additional funds for a research account.

-----  
NOTES:

PROCESSES:

2

2.4

2.4.1





---

DATA FLOW NAME:

BILLET-CHANGE-NOTIFICATION

---

ALIASES:

---

COMPOSITION:

Unstructured report to departmental management  
of a change to the billet listing.

---

NOTES:

PROCESSES:

- 1.
- 1.2
- 1.2.3



-----  
DATA FLOW NAME:

BILLET-LISTING  
-----

ALIASES:  
-----

COMPOSITION:

= [ O MN-CIVILIAN-FACULTY ]  
[ ADJUNCT-CIVILIAN-FACULTY ]  
[ ADJUNCT-REIMBURSABLE-CIVILIAN-FACULTY ]  
[ MILITARY-FACULTY ]

CIVILIAN-BILLETS-BY-QUARTER + MAN-YEARS

-----  
NOTES:

PROCESSES:

1

1.3



---

DATA FLOW NAME:

BUDGET-REQUEST

---

ALIASES:

---

COMPOSITION:

= DEPT + DATE + DESCRIPTION/BUDGET-ELEMENT + FYBX/OPTAR  
+ FISCAL-YEAR-198(X+1)

---

NOTES:

PROCESSES:

2

2.2.4



-----  
DATA FLOW NAME:

COURSE-JOURNAL  
-----

ALIASES:

-----

COMPOSITION:

= PROF + COURSE-NUMBER + COURSE-NAME + AY-QTR +  
NO-SEGMENTS + TEXTBOOK-USED + GRADE-DISTRIBUTION +  
COURSE-COORDINATOR

-----  
NOTES:

PROCESSES:

1

1.3





---

DATA FLOW NAME:

COURSE/RESEARCH-REQUIREMENTS

---

ALIASES:

---

COMPOSITION:

= 1{ AY-ATR + {COURSE-NUMBER + NO-STU} }4+  
    {RESEARCH + PROF}

---

NOTES:

PROCESSES:

1

1.3



-----  
DATA FLOW NAME: CPO-LISTING (CURRENT)  
-----

ALIASES: PERSONNEL-LISTING  
-----

COMPOSITION:

= { NAME + SSN + EMPLOYEE-NUMBER + ACTIVITY-SERVICE-  
COMPUTATION-DATE + TYPE-APPOINTMENT + (LIMITED-  
APPOINTMENTS) + (PROBATION-PERIOD) + BILLET-NO + PD/JD-  
NO + POSITION-TITLE + PAY-PLAN + OCCUPATION-SERIES-  
CODE + GRADE-LEVEL + SALARY-STEP + DATE-OF-EQUIVALENT-  
INCREASE }

-----  
NOTES:

PROCESSES:

1

1.1

This is the current format that the Civilian  
Personnel Office (CPO) upon request. They can  
provide on a regular basis if requested.



-----  
DATA FLOW NAME: CPO-LISTING (PROPOSED)  
-----

ALIASES: NEW-PERSONNEL-LISTING  
-----

COMPOSITION:

= { NAME + SSN + EMPLOYEE-NUMBER + (ACADEMIC-DISCIPLINE)  
+ TYPE-APPOINTMENT + (TENURE) + GRADE-LEVEL + SALARY-  
STEP + SALARY + (POSITION-STATUS) + ACTIVITY-SERVICE-  
COMPUTATION-DATE + POSITION-TITLE + (LIMITED-APPOINT-  
MENT) + (PROBATION-PERIOD) + (BILLET-NO) + PD/JD-NO +  
PAY-PLAN + OCCUPATION-SERIES-CODE + (FACULTY-YEARS-OF-  
EXPERIENCE) + (FACULTY-INITIAL-RANK) + (FACULTY-  
APPOINTMENTS-CURRENT-RANK) + DATE-OF-EQUIVALENT-  
INCREASE }

-----  
NOTES:

PROCESSES:

1

1.1

This is a proposed format for a new CPO listing. The extra data is used in the Faculty-Performance-Report for the Chairman. CPO should be asked to provide the report quarterly.



-----  
DATA FLOW NAME:

DISPOSAL-REQUEST  
-----

ALIASES:  
-----

COMPOSITION:

Conceptual data flow from faculty/staff requesting  
removal of furniture/equipment from a specific location.

-----  
NOTES:

PROCESSES:

3

3.3

Eventually this request would cause the property to be  
re-located either to another department space or a turn-  
in to the supply officer.





-----  
DATA FLOW NAME:

EMERGENCY-REQUEST  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured request to departmental management by  
the funds administrator for additional funds.

-----  
NOTES

PROCESSES:

2

2.4



-----  
DATA FLOW NAME: EXPENDITURE-HISTORY  
-----

ALIASES: OPTAR-BUDGET-EXPENDITURE-DATA  
-----

COMPOSITION:

= ITEMS + AY 8X-8Y + AY 8Y-8Z

-----  
NOTES:

PROCESSES:

2

2.4

AY 8X-8Y = OPTAR + OTHER + TOTAL ,  
i.e., AY 80-81

AY 8Y-8Z = BUDGET + EXPENDITURE+DIFFERENCE ,  
i.e., AY 81-82



-----  
DATA FLOW NAME:

EXPENDITURE-REQUEST  
-----

ALIASES:  
-----

COMPOSITION:

Conceptual data flow emanating from various sources within the department. Usually the request will be from faculty and can be handled with departmental funds (0 MN or Dept 10%), but it could be from a research account's principle investigator, and, as such, s/he has authority to cite the research account on the obligation.

-----  
NOTES:

PROCESSES:

2

2.2



-----  
DATA FLOW NAME:

FACULTY-ACTIVITY-REPORT  
-----

ALIASES:  
-----

COMPOSITION:

= PROF + RANK + INSTRUCTIONAL-ACTIVITIES +  
PUBLISHING + RESEARCH +  
OTHER-PROFESSIONAL-ACTIVITIES-EXTERNAL-TO-NPS +  
SERVICE-TO-NPS + PLANS-FOR-198X

-----  
NOTES:

PROCESSES:

1

1.3

1.3.2





-----  
DATA FLOW NAME:

FACULTY-AVAILABILITY-REPORT  
-----

ALIASES:

-----

COMPOSITION:

= { PROF + ACADEMIC-DISCIPLINE + TYPE-APPOINTMENT +  
TENURE + GRADE-LEVEL + SALARY-STEP + SALARY + (POSITION-  
STATUS) + ACTIVITY-SERVICE-COMPUTATION-DATE + POSITION-  
TITLE + ( LIMITED-APPOINTMENT) + (PROBATION-PERIOD) +  
(FACULTY-YEARS-OF-EXPERIENCE) + (FACULTY-INITIAL-RANK) +  
(FACULTY-APPOINTMENTS-CURRENT-RANK) + { NPS-PROMOTION-  
HISTORY } + { ACADEMIC-HISTORY } + { MILPERS-INFO} }

-----  
NOTES:

PROCESSES:

1

1.3

1.3.2

Promotion history is not part of current or proposed  
CPO reports. Personnel file in the Department would  
retain all past grade/grade level information as a  
person is promoted.



-----  
DATA FLOW NAME: FACULTY-BUDGET  
-----

ALIASES:  
-----

COMPOSITION:

= CODE + OMN-TEACHING + MIL-TEACHING + ADMIN + AA +  
THESIS + ED/CE + TRANSFERS + SABB + TOTAL-OMN +  
OMN-CIV-FACULTY + RSCH-REIMB

TRANSFERS = [ FROM ]  
[ TO ]

OMN-FACULTY = PERM + ADJ

-----  
NOTES:

PROCESSES:

1  
1.3  
1.3.4

Enclosure to the faculty budget will also  
be the billet listing.



-----  
DATA FLOW NAME: FACULTY-CERTIFICATION-REPORT  
-----

ALIASES: CIVILIAN-FACULTY-EMPLOYMENT-CERTIFICATE  
-----

COMPOSITION:

= 1 { FACULTY + BI-WEEKLY-PERIOD } N

N = number of faculty

-----  
NOTES:

PROCESSES:

1

1.4

1.4.2

Report only shows changes from the faculty employment schedule, i.e., sick and annual leave, travel, leave without pay.



-----  
DATA FLOW NAME:

FACULTY-COURSE-DATA  
-----

ALIASES:  
-----

COMPOSITION:

= { COURSE-NUMBER + COURSE-NAME + 1{ PROF-NAME } S +  
NO-SEGMENTS }

S = number of segments

-----  
NOTES:

PROCESSES:

1

1.3

1.3.4

Report is made by annotating the quarterly  
course load report and sending it to the scheduler.





-----  
DATA FLOW NAME: FACULTY-EMPLOYMENT-SCHEDULE  
-----

ALIASES:  
-----

COMPOSITION:

= { PROF + { SUMMARY + EMPLOYMENT-SCHEDULE } }

-----  
NOTES:

PROCESSES:

1

1.3

1.3.4

The same funding source may be applied to several periods, i.e.,

1-30 Oct	ABCDE
31 OCT-15 NOV	FGHIJ
16 NOV-31 DEC	ABCDE



---

DATA FLOW NAME: FACULTY-EMPLOYMENT-WORKSHEET

---

ALIASES: EMPLOYMENT-SCHEDULE-WORKSHEET

---

COMPOSITION:

= CODE + MQ + {FACULTY + QUARTERLY-ASSIGNMENT }

---

NOTES:

PROCESSES:

1

1.3

1.3.2



-----  
DATA FLOW NAME:

FACULTY-EXCEPTION-REPORT  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured report to management concerning deviation  
from faculty employment schedule, i.e.,  
2 days annual leave 10-11 Oct.

-----  
NOTES:

PROCESSES:

1

1.4

1.4.1

Will be used to prepare faculty certification  
report.



-----  
DATA FLOW NAME:

FUNDING-DEFICIENCY-REPORT  
-----

ALIASES:

-----

COMPOSITION:

= { ACCOUNT-BALANCES } + { PRINCIPLE-INVESTIGATOR +  
{ RESEARCH + ACCOUNT=BALANCES} }

-----  
NOTES:

PROCESSES:

2

2.3

2.3.1





-----  
DATA FLOW NAME:

INQUIRY-RESPONSE  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured reply from the personnel support  
detachment concerning previous travel matter inquiries.

-----  
NOTES:

PROCESSES:

2

2.2



-----  
DATA FLOW NAME:

JOB-ORDER-CARD  
-----

ALIASES:        LABOR-JOB-TIME-CARD (NAVDOCKS-1950)  
-----

COMPOSITION:

= DATE + NAME + EMPLOYEE-NUMBER + {JOB-ORDER-NUMBER +  
ACTUAL-HOURS} + AUTHORIZED-SIGNATURE

-----  
NOTES:

PROCESSES:

2

2.2

NPS notice 4235 (series) publishes job order data.



-----  
DATA FLOW NAME:

JOB-ORDER-CHARGES  
-----

ALIASES:

FUNDING-FOR-REIMBURSABLE-EMPLOYEES-REPORT  
-----

COMPOSITION:

= 1{ 1{ NAME + DATES + DAYS + COSTC + SEGMENT +  
HPW}F}N

N = number of employees

F = separate funding sequences

-----  
NOTES:

PROCESSES:

2

2.2

Dean of research initiates  
the listing. The department  
completes the funding data.



-----  
DATA FLOW NAME:               LABOR-SAVINGS-DEVICE-REPORT  
-----

ALIASES:                       LSDR-REPORT  
-----

COMPOSITION:

= DEPT + { NOMENCLATURE + MAKE/MODEL + SERIAL-NO +  
          LOCATION + SUPPLY-DEPT-INFO + ( PLANT-ACCOUNT-NO) +  
          YEAR-ACQUIRED }

-----  
NOTES:

PROCESSES:

3

3.2

Annual report to supply department for all labor saving devices, i.e., calculators, typewriters, safes, micro-fiche readers, word processing equipment, dictaphones, and computer terminals.





-----  
DATA FLOW NAME:

LOCATOR-SCHEDULE  
-----

ALIASES:  
-----

COMPOSITION:

= { PROF + { COURSE-NUMBER + { PERIOD + ROOM } } }

-----  
NOTES:

PROCESSES:

1

1.3

1.3.4



-----  
DATA FLOW NAME:

MANAGEMENT-ACTION  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured information flow from management level  
directing personnel action, i.e.,

revision of position description

increase in salary step

-----  
NOTES:

PROCESSES:

1

1.1

1.1.2

1.1.2.1



-----  
DATA FLOW NAME:

MANAGEMENT-DIRECTION  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured direction from departmental management  
to modify space or equipment

-----  
NOTES:

PROCESSES:

3

3.2

3.2.1



-----  
DATA FLOW NAME:

MASTER-SCHEDULE  
-----

ALIASES: MASTER-INSTRUCTION-SCHEDULE, 12ND NPS 5330/5  
-----

COMPOSITION:

= AY-QTR + EFFECTIVE-DATES + FINAL-EXAM-PERIOD +  
{ COURSE-NUMBER + CREDIT-HOURS + NO-STU + WEEKDAY }

-----  
NOTES:

PROCESSES:

1

1.3

1.3.4





-----  
DATA FLOW NAME:

MATERIAL-TURN-IN-REQUEST  
-----

ALIASES:  
-----

COMPOSITION:

Memorandum to supply officer to indicate transfer of property for eventual re-utilization within NPS or transfer to the ft. ord property disposal office. It consists of a minimum of:

NOMENCLATURE + LOCATION + COST +

(PLANT-ACCOUNT-NUMBER)

-----  
NOTES:

PROCESSES:

3

3.3



-----  
DATA FLOW NAME:       NOTIFICATION-OF-PERSONNEL-ACTION  
-----

ALIASES:                       SF-50  
-----

COMPOSITION:

= NAME + SSN + DATE-OF-BIRTH + (VETERANS-PREFERENCE) +  
SERVICE-COMPUTATION-DATE + (TENURE) + (RETIREMENT) +  
(FEGLI) + (FLSA) + SEX + CITIZENSHIP + EFFECTIVE-DATE +  
(ANNUITANT-INDICATOR) + WORK-SCHEDULE + { NOAC +  
NATURE-OF-ACTION + AUTH-CODE + AUTHORITY} + [FROM/TO] +  
( NAME-AND-LOCATION-OF-EMPLOYING-OFFICE + PAY/PLAN +  
OCCUPATIONAL-CODE + GRADE + SALARY-STEP + PAY-BASIS +  
DUTY-STATION + POSITION-OCCUPIES + (APPROPRIATION-  
CODE) + REMARKS

FROM/TO = POSITION-TITLE + NUMBER

-----  
NOTES:

PROCESSES:

1  
1.1  
1.1.1

The normal times that the SF50 is received is for  
new employees, promotions, or lateral transfers within  
the same pay grade.



-----  
DATA FLOW NAME: NOTIFICATION-OF-COMPLETION-OF-PERSONNEL-FILE  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured verbal report to departmental management  
that initial personnel file entries have been made.

-----  
NOTES:

PROCESSES:

1  
1.1  
1.1.2  
1.1.2.1



-----  
DATA FLOW NAME:

OPTAR-GRANT .(OMN)  
-----

ALIASES:

OPERATING-TARGET  
-----

COMPOSITION:

= 1ST-QTR + 2ND-QTR + 3RD-QTR + 4TH-QTR = TOTAL

-----  
NOTES:

PROCESSES:

2

2.1





-----  
DATA FLOW NAME:

OVERTIME-REQUEST  
-----

ALIASES:

-----

COMPOSITION:

= FROM + TO + VIA + TYPE + { EMPLOYEE-NUMBER + NAME +  
NO-HOURS + INCLUSIVE-TIMES } + JOB-ORDER-NUMBER +  
(WORK- ORDER-NO) + LOCATION + JUSTIFICATION +  
AUTHORIZED- SIGNATURE

-----  
NOTES:

PROCESSES:

1

1.4

1.4.4

FROM: 54

TO: 002

VIA: 05

Must be approved in advance of  
the work being performed.



-----  
DATA FLOW NAME:            PERS-AVAILABILITY-FOR-SCHEDULING  
-----

ALIASES:  
-----

COMPOSITION:

Conceptual flow - communication occurs simultaneously  
at time of assignment and throughout employment.

-----  
NOTES:

PROCESSES:

1.2

1.2.3



-----  
DATA FLOW NAME:

PERSONAL-BIOGRAPHY  
-----

ALIASES:  
-----

COMPOSITION:

= NAME + (ADDRESS) + (TELEPHONE-NUMBER) + (BIRTHDATE) +  
(BIRTHPLACE) + ( {DEGREE-HISTORY} ) + {WORK-HISTORY} +  
( {COMMERCIAL-INTERESTS} ) + (MARITAL-STATUS) +  
(REMARKS)

-----  
NOTES:

PROCESSES:

1

1.1

1.1.2

Employee may decline to provide some of the  
information.



-----  
DATA FLOW NAME:                   PERSONNEL-PREFERENCE-REPORT  
-----

ALIASES:  
-----

COMPOSITION:

= PROF + { COURSE-NAME + COURSE-NUMBER + AY-QTR }  
      (REMARKS) + { RESEARCH-QTR }

-----  
NOTES:

PROCESSES:

1

1.1

1.1.2

Input by faculty to indicate which courses/quarters they would like to teach and which quarter(s) should be scheduled for research.





---

DATA FLOW NAME: PERSONNEL-AVAILABLE-FOR-ASSIGNMENT

---

ALIASES:

---

COMPOSITION:

Conceptual data flow - occurs simultaneously with personnel actions.

---

NOTES:

PROCESSES:

1

1.2

1.2.3



-----  
DATA FLOW NAME:        PERSONNEL-NOTIFICATION-OF-ASSIGNMENT  
-----

ALIASES:  
-----

COMPOSITION:

      = NAME + SPACE-DATA

-----  
NOTES:

      PROCESSES:

          1

          1.2

          1.2.3



-----  
DATA FLOW NAME: PLANT-ACCOUNT-RECEIPT-REPORT  
-----

ALIASES: PLANT-ACCOUNT-REPORT  
-----

COMPOSITION:

Same format as the triennial plant account report,  
but this report is completed upon each new receipt of  
an item in the plant account category, usually informally  
to 002.

-----  
NOTES:

PROCESSES:

3

3.1

NPS INST 11016.1A



-----  
DATA FLOW NAME: PLANT-ACCOUNT-REPORT  
-----

ALIASES:  
-----

COMPOSITION:

= DEPT + {NOMENCLATURE + PLANT-ACCOUNT-NUMBER + SERIAL-  
NUMBER + LOCATION + QUANTITY}

-----  
NOTES:

PROCESSES:

3

3.2

Plant account equipment = non-consummable equipment  
with an expected life > = 2 years + acquisition cost  
> =\$1000.

NPS INST 11016.1A





-----  
DATA FLOW NAME:

PROPERTY-ASSIGNMENT  
-----

ALIASES:  
-----

COMPOSITION:

Conceptual data flow to indicate the assignment of equipment to a particular location under departmental control.

-----  
NOTES:

PROCESSES:

3

3.1



-----  
DATA FLOW NAME:

READY-SUPPLY-STORE-REQUEST  
-----

ALIASES: OFFICE-SUPPLIES,TURN-IN-OR-REQUEST(12ND NPS 4400/1)  
-----

COMPOSITION:

FROM + DATE + ISSUE/TURN-IN + TO + APPROVED-BY + (CREDIT-  
CARD-NO) + (DATE-REQUIRED) + { NO + STOCK-NO-AND-DESCRIP-  
TION + U/I + QUANTITY + ACTION + U/P + COST } + ISSUED-  
BY + DATE + RECEIVED-BY + TOTAL

-----  
NOTES:

PROCESSES:

2

2.2



-----  
DATA FLOW NAME: REQUEST-FOR-PERSONNEL-ACTION  
-----

ALIASES: SF-52  
-----

COMPOSITION:

= PART-I + PART-II

PART-I = [PERSONNEL-ACTION] + REQUESTOR + POINT-OF-CONTACT  
[POSITION-ACTION ]

PERSONNEL-ACTION = PERSONNEL-ACTION-REQUESTED + PROPOSED-  
EFFECTIVE-DATE + (REMARKS)

POSITION-ACTION = POSITION-ACTION-REQUESTED + PROPOSED-  
EFFECTIVE-DATE + (REMARKS)

PART-II = [PERSONNEL-DATA]  
[POSITION-DATA ]

PERSONNEL-DATA = NAME+SSN+(BIRTHDATE)+NATURE-OF-ACTION

POSITION-DATA = FROM/TO = POSITION-TITLE+NUMBER+EMPLOYING-  
OFFICE+PAY-PLAN+OCCUPATIONAL-SERIES-CODE+GRADE-LEVEL  
+SALARY-STEP+(SALARY)+PAY-BASIS

-----  
NOTES:

PROCESSES:

- 1
- 1.1
- 1.1.2

MULTI-USE FORM - TOO MANY VARIETIES OF USE TO  
ADEQUATELY DOCUMENT ALL THE POSSIBILITIES.



-----  
DATA FLOW NAME:

REQUEST-FOR-PERSONNEL-INFORMATION  
-----

ALIASES:  
-----

COMPOSITION:

Conceptual data request for personal input

-----  
NOTES:

PROCESSES:

1

1.1

1.1.1





-----  
DATA FLOW NAME:

REQUISITIONS  
-----

ALIASES:

DD-FORM-1348  
-----

COMPOSITION:

(DOC-IDENT) + (ROUTING-IDENTIFIER) + (MS) + U/I +  
QUANTITY + DOCUMENT-NUMBER + DEMAND + SUPPLEMENTARY-  
ADDRESS + (SIGNAL) + (FUND) + (DISTRIBUTION) + (PROJECT) +  
(PRIORITY) + (ADVICE) + (REMARKS)

-----  
NOTES:

PROCESSES:

2

2.2

See supply department customer service manual,  
chapter 4, for a complete description of all the codes.



-----  
DATA FLOW NAME:

RESEARCH-IDEA  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured report to department management  
detailing an outline for a research proposal.

-----  
NOTES:

PROCESSES:

2

2.4

2.4.2



-----  
DATA FLOW NAME:

RESEARCH-PROPOSAL  
-----

ALIASES:  
-----

COMPOSITION:

= PRINCIPLE-INVESTIGATOR + TITLE + LABOR + (OFFICE-  
SPACE )+ (LABORATORY-SPACE) + (COMPUTER-RESOURCES) +  
(LIBRARY-RESOURCES-REQR) + (OTHER-NPS-RESOURCES-  
REQR) + {SECONDARY-INVESTIGATORS} + SPONSOR

-----  
NOTES:

PROCESSES:

2

2.4

2.4.2



-----  
DATA FLOW NAME:

RESEARCH-SUPPORT  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured report to indicate to which research  
account specific support personnel will be charged.

-----  
NOTES:

PROCESSES:

1

1.4

1.4.3





---

DATA FLOW NAME:

RESOURCE-DATA-DISPLAY

---

ALIASES:

---

COMPOSITION:

= EMPLOYEE-DATA + AVAILABLE-SPACE-DATA

---

NOTES:

PROCESSES:

1

1.2

1.2.1



-----  
DATA FLOW NAME:

SOF-DATA  
-----

ALIASES:       STUDENT-OPINION-FORM-STATISTICS  
-----

COMPOSITION:

= {PROF + FACULTY-YEARS-OF-EXPERIENCE + TEACHING-LOAD  
+ COURSE-NUMBER + AY-QTR + NO-STU + {CURRICULUM} +  
Q1{MEAN}Q11 + MEAN(Q1-Q11) + MEAN(Q12) + MEAN(Q13)}

-----  
NOTES:

PROCESSES:

1

1.3

1.3.2



-----  
DATA FLOW NAME: SPACE-UTILIZATION-REPORT  
-----

ALIASES:  
-----

COMPOSITION:

= { LOCATION + USE + RES + AREA + CAP + NCC + A/N +  
AVAIL + ABCDEFG + KLMNOP + REMARKS + JUL }

-----  
NOTES:

PROCESSES:

3

3.2

Submission of report is the responsibility of the building co-ordinator (code 36), but the department has the responsibility of verifying the data.



-----  
DATA FLOW NAME:                   STATUS-OF-FUNDS-REPORT  
-----

ALIASES:                           BI-WEEKLY-PRINTOUT  
-----

COMPOSITION:

= { ACCOUNT + AS-OF-DATE + 1{ DATE + CATEGORY-CODE + ITEM-  
DESCRIPTION + (UPDATE-INFO) + STUB-NUMBER + (LABOR-  
OBLIGATION) + (OTHER-OBLIGATION) + (SUBSIDIARY-OBLIGA-  
TION) + (SUBSIDIARY-BALANCE) + (ACCOUNT-BALANCES)} +  
SUMMARY-OF-CATEGORY-CHARGES + (ACCOUNT-BALANCES)}

-----  
NOTES:

PROCESSES:

2

2.1

2.3

2.3.1

Report received by-weekly from research office on all  
research accounts (including department's 10% funds).  
Monthly report received from comptroller for OMN funds.  
All transactions are listed (plus updates) from beginning  
of fiscal year or account inception, whichever earlier.





-----  
DATA FLOW NAME:

SUPERVISOR'S-REQUEST  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured request from supervisor for permission for  
a subordinate to work overtime, i.e., more than 8 hours  
in one day or more than 40 hours in one week.

-----  
NOTES:

PROCESSES:

1

1.4

1.4.4



-----  
DATA FLOW NAME:       SUPPORT-PERSONNEL-REQUIREMENTS  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured verbal report indicating a need for a  
support person to be assigned to a task or function.

-----  
NOTES:

PROCESSES:

1

1.3

1.3.1



-----  
DATA FLOW NAME:                   TENTATIVE-FACULTY-SCHEDULE  
-----

ALIASES:  
-----

COMPOSITION:

= 1{AY-QTR + {PROF +  $\left[ \begin{array}{l} \text{COSTC} \\ \text{COURSE-NAME} + \text{COURSE-NUMBER} \end{array} \right] \}}}$

-----  
NOTES:

PROCESSES:

1

1.3

1.3.3

Department scheduler indicates for each quarter if a professor will be teaching or on research (costc).



-----  
DATA FLOW NAME: TEXTBOOK-ORDER  
-----

ALIASES:  
-----

COMPOSITION:

= DEPT + AY-QTR + {COURSE-NUMBER + NO-SEGMENTS + PROF  
+ {TEXTBOOK-TITLE + PUBLISHER + QUANTITY +  
REQUIRED/RECOM- MENDED}}

-----  
NOTES:

PROCESSES:

1

1.3

1.3.4





-----  
DATA FLOW NAME:

THESIS-REPORT  
-----

ALIASES:  
-----

COMPOSITION:

= STUDENT-NAME + CURRICULUM + TITLE + AY-QTR + ADVISOR

-----  
NOTES:

PROCESSES:

1

1.3

1.3.2

Academic quarter indicated is the graduation quarter  
for the student.



-----  
FLOW NAME: TIME-CARDS

-----  
SES: BI-WEEKLY-TIME-CARD (NAVCOMPT-FORM-911A)

-----  
POSITION:

EMPLOYEE-NUMBER + NAME + PERIOD-ENDING + (NUMBERS) +

[REGULAR-HOURS ]

1{[OVERTIME-HOURS] }14 + AUTHORIZED-SIGNATURE

[LEAVE-HOURS ]

-----  
S:

PROCESSES:

1

1.4

1.4.1



-----  
DATA FLOW NAME: TRAVEL-ORDERS  
-----

ALIASES: TEMADD-TRAVEL-ORDER(NAVPERS 1320/16)  
-----

COMPOSITION:

= FROM + TO + DOCUMENT-NUMBER + TANGO-NR + SSN + DATE +  
REF + TYPE-TRAVEL + PROCEED-DATE + NO-DAYS +  
ESTIMATED-DATE-OF-RETURN + { ITINERARY } + TYPE-OF-  
TEMP-DUTY + REASON-FOR-TRAVEL + { ACCOUNTING-DATA } +  
ESTIMATED-COST + CUSTOMER-IDENTIFICATION-CODE

-----  
NOTES:

PROCESSES:

2

2.2



-----  
DATA FLOW NAME:                   UNFUNDED-REQUIREMENTS  
-----

ALIASES:  
-----

COMPOSITION:

Unstructured report to the dean of information and policy sciences, usually in the form of a memorandum listing the nature, cost, and justification for the requirement.

-----  
NOTES:

PROCESSES:

2

2.4





-----  
DATA FLOW NAME: WORK-PERFORMED-REPORT  
-----

ALIASES:  
-----

COMPOSITION:

Verbal report from supervisor that a subordinate  
had performed scheduled work.

-----  
NOTES:

PROCESSES:

1

1.3

Used to initiate preparation of time cards or  
faculty certification report.



-----  
DATA FLOW NAME:

WORK-REQUEST  
-----

ALIASES:

-----  
COMPOSITION:

FROM + TO + REQUEST-FOR + DESCRIPTION

-----  
NOTES:

PROCESSES:

3

3.2

Request is submitted to the public works officer via the planning officer to alter, in some way, the building layout.



# DATA ELEMENT NAMES

No.	DATA ELEMENT NAMES
1	A/N
2	AACSB/NASBA-MEMBERSHIP-FEES
3	ABCDEFGF
4	ACADEMIC-DISCIPLINE
5	ACADEMIC-HISTORY
6	ACADEMIC-YEAR
7	ACCOUNT
8	ACCOUNT-BALANCES
9	ACCOUNTING-DATA
10	ACTIVITY-NATURE
11	ACTIVITY-SERVICE-COMPUTATION-DATE
12	ACTUAL-HOURS
13	ADDRESS
14	ADJUNCT-CIVILIAN-FACULTY
15	ADJUNCT-REIMBURSABLE-CIVILIAN-FACULTY
16	ADMIN-SUPPORT
17	ADVISOR
18	AREA
19	AS-OF-DATE
20	AUTHORIZED-SIGNATURE
21	AVAIL
22	AVAILABLE-SPACE-DATA
23	AY-QTR
24	BI-WEEKLY-PERIOD
25	BILLET-NO
26	BIO-DATA
27	BIOGRAPHIC
28	BIRTHDATE
29	BIRTHPLACE
30	CAP
31	CATEGORY-CODE
32	CITY



No.	DATA ELEMENT NAMES
33	CIVILIAN-BILLETS-BY-QUARTER
34	CODE
35	COMMERCIAL-INTERESTS
36	COMMUNICATIONS
37	COMPUTER-RESOURCES
38	CONTINUING-EDUCATION-ACTIVITY
39	COST
40	COSTC
41	COURSE-COORDINATOR
42	COURSE-HISTORY
43	COURSE-NAME
44	COURSE-NUMBER
45	COURSE-PREFERENCE
46	COURSE/LABORATORY-DEVELOPMENT
47	COURSES-OFFERED
48	COURSES-REQUESTED
49	CPO-DATA
50	CREDIT-HOURS
51	CURRICULUM
52	CURRICULUM-CODE
53	CURRICULUM-DEGREE
54	DATE
55	DATE-OF-EQUIVALENT-INCREASE
56	DATE-OF-LAST-UP-DATE
57	DATE-OF-RANK
58	DATES
59	DAYS
60	DEGREE
61	DEGREE-HISTORY
62	DEMAND
63	DEPT
64	DESCRIPTION
65	DESCRIPTION/BUDGET-ELEMENT





No.	DATA ELEMENT NAMES
66	DOCUMENT-NUMBER
67	EFFECTIVE-DATES
68	EMPLOYEE-DATA
69	EMPLOYEE-NUMBER
70	EMPLOYMENT-SCHEDULE
71	EOQ
72	EQUIPMENT(\$200>\$<\$3000)
73	EQUIPMENT-DATA
74	EQUIPMENT-MAINTENANCE
75	ESTIMATED-COST
76	EXAM-WEEK
77	EXPIRES
78	FAC-HRS
79	FACULTY
80	FACULTY-APPOINTMENTS-CURRENT-RANK
81	FACULTY-INITIAL-RANK
82	FACULTY-TAD
83	FACULTY-YEARS-OF-EXPERIENCE
84	FINAL-EXAM
85	FINAL-EXAM-PERIOD
86	FIRM
87	FREQUENCY-ASSIGNED
88	FUNDING-SOURCE
89	FURNITURE/SIGNS
90	GRADE-DISTRIBUTION
91	GRADE-LEVEL
92	HPW
93	INCLUSIVE-DATES
94	INCLUSIVE-TIMES
95	INSTITUTION
96	INSTRUCTIONAL-ACTIVITIES
97	ISSUE/TURN-IN
98	ITEM
99	ITEM-DESCRIPTION



No.	DATA ELEMENT NAMES
100	ITEMS
101	JOB-ORDER-NUMBER
102	JUL
103	JUSTIFICATION
104	KLMNOP
105	LABOR
106	LABOR-OBLIGATION
107	LABORATORY-SPACE
108	LEAVE-HOURS
109	LIBRARY-RESOURCE-REQR
110	LIMITED-APPOINTMENTS
111	LINEAL-NUMBER
112	LOCATION
113	MAJOR
114	MAKE & MODEL
115	MAN-YEARS
116	MARITAL-STATUS
117	MEAN
118	MEAN (Q1-Q11)
119	MEAN (Q12)
120	MEAN (Q13)
121	MILITARY-FACULTY
122	MILPERS-INFO
123	MQ
124	NAME
125	NCC
126	NO-DAYS
127	NO-HOURS
128	NO-SEGMENTS
129	NO-STU
130	NOMENCLATURE
131	NPS-PROMOTION-HISTORY
132	NSN



No.	DATA ELEMENT NAMES
133	O&MN-CIVILIAN-FACULTY
134	OBLIGATION
135	OCCUPATION-SERIES-CODE
136	OFFICE-SPACE
137	OTHER-NPS-RESOURCE-REQR
138	OTHER-OBLIGATION
139	OTHER-PROFESSIONAL-ACTIVITIES-EXTERNAL-TO-NPS
140	OTHER-PURCHASED-SERVICES
141	OVERTIME-HOURS
142	P.O.BOX
143	PAY-BASIS
144	PAY-PLAN
145	PD/JD-NO
146	PERIOD
147	PERIOD-ENDING
148	PLANS-FOR-198X
149	PLANT-ACCOUNT-NUMBER
150	POSITION-STATUS
151	POSITION-TITLE
152	PREVIOUS-ACADEMIC-ASSIGNMENTS
153	PREVIOUS-ASSIGNMENT
154	PREVIOUS-DEMAND
155	PRINCIPLE-INVESTIGATOR
156	PROBATION-PERIOD
157	PROF
158	PROFESSIONAL
159	PROPOSED-DATE
160	PROPOSED-EFFECTIVE-DATE
161	PUBLISH-DATE
162	PUBLISHER
163	PUBLISHING
164	PURCHASE-ORDER-NO
165	PURCHASED-PRINTING



No.	DATA ELEMENT NAMES
166	QTR
167	QUANTITY
168	QUARTER-OFFERED
169	QUARTERLY-ASSIGNMENT
170	RANK
171	REGULAR-HOURS
172	REMARKS
173	REQUEST-FOR
174	REQUIRED/RECOMMENDED
175	RES
176	RESEARCH
177	RESEARCH-ACCOUNT
178	RESEARCH-AREA
179	RESEARCH-QTR
180	ROOM
181	ROTATION-DATE
182	SALARY
183	SALARY-STEP
184	SECONDARY-INVESTIGATORS
185	SECTION
186	SEGMENT
187	SELF-IMPROVEMENT-EFFORTS
188	SERIAL-NUMBER
189	SERVICE-TO-NPS
190	SOF
191	SOURCE-OF-SUPPLY
192	SPACE-DATA
193	SPONSOR
194	SSN
195	STATUS
196	STOCK-NO-AND-DESCRIPTION
197	STREET-NAME
198	STREET-NUMBER
199	STUB-NUMBER
200	STUDENT-NAME





No.	DATA ELEMENT NAMES
201	SUBMISSION-DATE
202	SUBSCRIPTION/BOOKS
203	SUBSIDIARY-BALANCE
204	SUBSIDIARY-OBLIGATION
205	SUM-TOTAL-OF-OBLIGATIONS
206	SUMMARY
207	SUMMARY-OF-CATEGORY-CHARGES
208	SUMMARY-OF-REIMB-MAN-QTRS
209	SUPPLEMENTARY-ADDRESS
210	SUPPLIES (\$<\$200)
211	SUPPLY-DEPT-INFO
212	TANGO-NR
213	TARGET
214	TEACHING
215	TEACHING-LOAD
216	TELEPHONE-COST
217	TELEPHONE-NUMBER
218	TENURE
219	TEXTBOOK-TITLE
220	TEXTBOOK-USED
221	THESIS
222	TITLE
223	TOTAL
224	TOTAL-FUNDS
225	TOTAL-REMAINING
226	TYPE
227	TYPE-APPOINTMENT
228	U/P
229	UPDATE-INFO
230	USE
231	UTILITIES-RENTAL-OF-EQUIPMENT
232	WEEKDAY
233	WORK-HISTORY



No.	DATA ELEMENT NAMES
234	WORK-ORDER-DATE
235	WORK-ORDER-NO
236	WORK-ORDER-STATUS
237	YEAR-ACQUIRED
238	YEAR-AWARDED
239	ZIP



-----  
DATA ELEMENT NAME:           A/N  
-----

ALIASES:   '  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:

    A           ADEQUATE

    N           NOT ADEQUATE

-----  
NOTE:

    FILE:   SPACE

    DATA FLOW:   SPACE UTILIZATION REPORT



-----  
DATA ELEMENT NAME: AACSB/NASPA-MEMBERSHIP-FEES  
-----

ALIASES: ASSOCIATION-FEES  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

NUMERIC IN DOLLAR UNITS

-----  
NOTES:

DATA FLOW: BUDGET REQUEST

SUBSET OF DATA ELEMENT(S): DESCRIPTION/BUDGET-  
ELEMENT; ITEMS





-----  
DATA ELEMENT NAME:    ABCDEFG

-----  
ALIASES:

-----  
ASSIGNED BY:    DEPARTMENT

-----  
VALUES AND MEANINGS:    COLUMN HEADING DESCRIBING PRIMARY USE  
                          OF SPACE,  
  
                          i.e., OFFICE.

-----  
NOTES:

FILE:    SPACE

DATA FLOW:    SPACE UTILIZATION REPORT

SUBSET OF DATA ELEMENT(S):    AVAILABLE SPACE DATA



-----  
DATA ELEMENT NAME:       ACADEMIC-DISCIPLINE  
-----

ALIASES:  
-----

ASSIGNED BY:   CIVILIAN PERSONNEL OFFICE (UPON INTERVIEWING  
                  NEW EMPLOYEE- MAY BE CHANGED BY DEPARTMENT  
-----

VALUES AND MEANINGS:   INDICATES FIELD OF MAJOR STUDY

4 NUMERIC DIGITS, i.e., 0502   -   accounting

-----  
NOTES:

FILE:   FACULTY

DATA FLOW:   CPO LISTING;   FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S): EMPLOYEE DATA



-----  
DATA ELEMENT NAME:     ACADEMIC-HISTORY

-----  
ALIASES:

-----  
ASSIGNED BY:

-----  
VALUES AND MEANINGS:

      =     TEACHING + THESIS + RESEARCH + PUBLISHING +  
              PROFESSIONAL + BIOGRAPHIC

-----  
NOTES:

      DATA FLOW:     FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME: ACADEMIC-YEAR  
-----

ALIASES:  
-----

ASSIGNED BY: PROVOST  
-----

VALUES AND MEANINGS: SELF DEFINING

EITHER 2 OR 4 NUMERIC DIGITS,i.e., 1984 OR 84

-----  
NOTES:

COINCIDES WITH FEDERAL FISCAL YEAR: 1 OCTOBER TO  
30 SEPTEMBER.

DATA FLOW: MASTER SCHEDULE





-----  
DATA ELEMENT NAME: ACCOUNT

-----  
ALIASES:

-----  
ASSIGNED BY: COMPTROLLER

-----  
VALUES AND MEANINGS: ARBITRARY NAME ASSIGNED TO FINANCIAL  
RECORD,i.e., DEPTAS, ELSTER2

-----  
NOTES:

FILE: OPTAR, RESEARCH

DATA FLOW: STATUS OF FUNDS REPORT



-----  
DATA ELEMENT NAME: ACCOUNT-BALANCES  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= ACCOUNT + COSTC + EXPIRES + TOTAL-REMAINING

-----  
NOTES:

FILE: OPTAR, RESEARCH

DATA FLOW: STATUS OF FUNDS REPORT



-----  
DATA ELEMENT NAME: ACCOUNTING-DATA  
-----

ALIASES:  
-----

ASSIGNED BY: COMPTROLLER  
-----

VALUES AND MEANINGS:

I.E., 1741804.1180 000 62271 0 000228

2D E EDNOO FP4TOA15221M

-----  
NOTES: SEE NPS NOTICE 4235(SERIES)

DATA FLOW: TRAVEL ORDERS, OPTAR(RESEARCH) GRANT



-----  
DATA ELEMENT NAME: ACTIVITY-NATURE  
-----

ALIASES:  
-----

ASSIGNED BY: FACULTY  
-----

VALUES AND MEANINGS:

i.e., committee

research grant

-----  
NOTES:

SUBSET OF DATA ELEMENT(S): PROFESSIONAL





-----  
DATA ELEMENT NAME: ACTIVITY-SERVICE-COMPUTATION-DATE  
-----

ALIASES:  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: DATE THAT EMPLOYEE STARTED EMPLOYMENT  
AT NPS.

NUMERIC: YYMMDD i.e., 830508 for May 5, 1983.

-----  
NOTES:

DATA FLOW: CPO LISTING, FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S): CPO DATA



-----  
DATA ELEMENT NAME: ACTUAL-HOURS  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

= REGULAR-HOURS + OVERTIME-HOURS

-----  
NOTES:

DATA FLOW: JOB ORDER CARD



-----  
DATA ELEMENT NAME: ADDRESS  
-----

ALIASES:  
-----

ASSIGNED BY: EMPLOYEE  
-----

VALUES AND MEANINGS:

[STREET-NUMBER + STREET-NAME]

+ CITY + ZIP

[ P.O.BOX

]

-----  
NOTES:

DATA FLOW: PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S): BIO-DATA



-----  
DATA ELEMENT NAME:  ADJUNCT-CIVILIAN-FACULTY  
-----

ALIASES:  
-----

ASSIGNED BY:  DIRECTOR OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS:  LISTING OF AUTHORIZED ADJUNCT  
                          CIVILIAN FACULTY

-----  
NOTES:

DATA FLOW:  BILLET LISTING





-----  
DATA ELEMENT NAME:  ADJUNCT-REIMBURSABLE-CIVILIAN-FACULTY  
-----

ALIASES:  
-----

ASSIGNED BY:  DIRECTOR OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS:  LISTING OF AUTHORIZED ADJUNCT FACULTY  
WHO ARE BEING PAID SOLEY BY EXTERNAL FUNDS

-----  
NOTES:

DATA FLOW:  BILLET LISTING



-----  
DATA ELEMENT NAME: ADMIN-SUPPORT

-----  
ALIASES: SECRETARIAL-SUPPORT

-----  
ASSIGNED BY: DEPARTMENT

-----  
VALUES AND MEANINGS: NUMERIC FIGURE (IN \$) FOR BUDGET ITEM  
LBELED ADMINISTRATIVE SUPPORT

-----  
NOTES:

SUBSET OF DATA ELEMENT(S): ITEMS



-----  
DATA ELEMENT NAME: ADVISOR

-----  
ALIASES:

-----  
ASSIGNED BY: DEPARTMENT

-----  
VALUES AND MEANINGS: ACADEMIC INSTRUCTOR ADVISING NPS  
STUDENT IN THESIS RESEARCH: TECHNICAL-  
DIFFERENT FROM THE READER WHO, THOUGH  
IS PRIMARILY RESPONSIBLE TO ADVISE ON  
THE STYLE OF WRITING, MUST ALSO ENSURE  
THAT THE RESEARCH SUBSTANCE IS VALID.  
IDENTIFICATION MAY BE EITHER LAST NAME, i.e., LYONS,  
or ROUTING CODE, i.e., 54js.

-----  
NOTES:

DATA FLOW: FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME: AREA

-----  
ALIASES:

-----  
ASSIGNED BY: DEPARTMENT/PUBLIC WORKS

-----  
VALUES AND MEANINGS: SQUARE FEET OF USABLE SPACE

NUMERIC -USUALLY LESS THAN 6 DIGITS

-----  
NOTES:

FILE: SPACE

DATA FLOW: SPACE UTILIZATION REPORT

SUBSET OF DATA ELEMENT(S): AVAILABLE-SPACE-DATA,

SPACE-DATA





-----  
DATA ELEMENT NAME: AS-OF-DATE  
-----

ALIASES:  
-----

ASSIGNED BY: PREPARER OF SPECIFIC REPORT  
-----

VALUES AND MEANINGS: THE DATE OF PREPARATION OF A REPORT,  
AFTER WHICH NO TRANSACTIONS ARE CONSIDERED.

CAN BE EITHER ALPHA-NUMERIC, i.e., 10 October 1983, or  
ALL NUMERIC, i.e., 10/10/83.

-----  
NOTES:

DATA FLOW: STATUS OF FUNDS REPORT



-----  
DATA ELEMENT NAME: AUTHORIZED-SIGNATURE  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: PERSON WHO IS AUTHORIZED TO SIGN A

DOCUMENT: MUST BE SPECIFIED IN ADVANCE.

ALPHA CHARACTERS, i.e., R.S. ELSTER

-----  
NOTES:

DATA FLOW: TIME CARDS, READY SUPPLY STORE REQUESTS,  
REQUISITIONS.

SUBSET OF DATA ELEMENT(S): CPO-DATA



-----  
DATA ELEMENT NAME: AVAIL

-----  
ALIASES:

-----  
ASSIGNED BY: DEPARTMENT

-----  
VALUES AND MEANINGS: SHORT, PLAIN LANGUAGE EXPLANATION AS  
TO WHY A SPACE IS NOT ADEQUATE.

-----  
NOTES:

FILE: SPACE

DATA FLOW: SPACE UTILIZATION REPORT



-----  
DATA ELEMENT NAME: AVAILABLE-SPACE-DATA  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= { LOCATION + USE + AREA + ABCDEFG + REMARKS }

-----  
NOTES:

DATA FLOW: RESOURCE DATA DISPLAY





-----  
DATA ELEMENT NAME:  AY-QTR  
-----

ALIASES:  
-----

ASSIGNED BY:  PROVOST  
-----

VALUES AND MEANINGS:

3 DIGITS IN THE FORM OF:  AYQ

AY = LAST TWO DIGITS OF ACADEMIC YEAR

Q  = 1,2,3,4

  i.e.  841

-----  
NOTES:

FILE:  COURSE

DATA FLOW:  MASTER SCHEDULE

SUBSET OF DATA ELEMENT(S):  COURSE-HISTORY,

COURSES OFFERED



-----  
DATA ELEMENT NAME: BI-WEEKLY-PERIOD  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS: THE NAMES OF THE WORKING DAYS IN FORT-

NIGHT, i.e.,

= MON + TUE + WED + THUR + FRI + MON + TUE + WED +

THUR + FRI

-----  
NOTES:

DATA FLOW: FACULTY CERTIFICATION REPORT



-----  
DATA ELEMENT NAME:     BILLET-NO  
-----

ALIASES:  
-----

ASSIGNED BY:   CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:   ARBITRARY NUMBERING SYSTEM FOR  
                         AUTHORIZED CIVILIAN BILLETS.   IT IS COMPOSED OF 4  
                         CHARACTERS, 3 NUMERIC FOLLOWED BY AN ALPHA CHARACTER,  
                         i.e. 456B.

-----  
NOTES:

FILE:   BILLET

SUBSET OF DATA ELEMENT(S):   EMPLOYEE-DATA



-----  
DATA ELEMENT NAME: BIO-DATA

-----  
ALIASES:

-----  
ASSIGNED BY:

-----  
VALUES AND MEANINGS:

+ (MARITAL-STATUS) + (ADDRESS) + (TELEPHONE-NUMBER) +  
(BIRTHDATE) + (BIRTHPLACE)

-----  
NOTES:

FILE: PERSONNEL

SECONDARY KEY





-----  
DATA ELEMENT NAME:        BIOGRAPHIC

-----  
ALIASES:

-----  
ASSIGNED BY:

-----  
VALUES AND MEANINGS:

BIRTHDATE + MARITAL-STATUS + {PREVIOUS-ACADEMIC-ASSIGN-  
MENTS} + { COMMERCIAL-INTERESTS} + { DEGREE-HISTORY } +  
(REMARKS)

-----  
NOTES:

DATA FLOW:   PERSONAL BIOGRAPHY, FACULTY AVAILABILITY  
REPORT

SUBSET OF DATA ELEMENT(S):   ACADEMIC HISTORY



-----  
DATA ELEMENT NAME: BIRTHDATE

-----  
ALIASES:

-----  
ASSIGNED BY: GOD

-----  
VALUES AND MEANINGS:

CONFIGURATION VARIABLE: ALL NUMERIC, SUCH AS, DDMMYY,  
i.e., 251136, OR ALPHANUMERIC, i.e., 25 NOVEMBER 1936.

-----  
NOTES:

SUBSET OF DATA ELEMENT(S): BIO-DATA, BIOGRAPHIC



-----  
DATA ELEMENT NAME: BIRTHPLACE  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

CITY, STATE, AND COUNTRY, IF NOT USA.

-----  
NOTES:

DATA FLOW: PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S): BIO-DATA, BIOGRAPHIC



-----  
DATA ELEMENT NAME: CAP

-----  
ALIASES:

-----  
ASSIGNED BY: PUBLIC WORKS/SAFETY OFFICER

-----  
VALUES AND MEANINGS: NORMALLY, THE NUMBER OF STATIONS IN  
A CLASSROOM OR LABORATORY, BUT MAXIMUM CAPACITY IN A  
HALL OR AUDITORIUM MAY HAVE TO BE PRESCRIBED.

-----  
NOTES:

FILE: SPACE

DATA FLOW: SPACE UTILIZATION REPORT





-----  
DATA ELEMENT NAME:

CATEGORY-CODE  
-----

ALIASES:  
-----

VALUES AND MEANINGS:

BK BOOK PURCHASE  
CE SUPPORT SALARY ON CONTINUING EDUCATION SHORT COURSES  
CH RESEARCH CHAIR SALARY  
CR CLAIM FOR REIMBURSEMENT  
EQ EQUIPMENT(PLANT ACCOUNT>\$1000  
FA FACULTY SALARY DURING ACADEMIC YEAR  
FC FACULTY SALARY FOR CONTINUING EDUCATION  
FI FACULTY SALARY DURING INTERSESSIONAL  
FO FACULTY SALARY WHEN OFF CAMPUS  
FR FUNDS RECEIVED(MAIN ACCOUNT FUNDS)  
FT FUNDS TRANSFER TO AGENCY OUTSIDE NPS  
HR HONORARIUM  
IC INDIRECT COSTS  
MC MAINTENANCE CONTRACTS  
MP MINOR PROPERTY (EQUIPMENT<\$1000)  
MS MISCELLANEOUS  
PR PRINTING AND REPRODUCTION COSTS  
PU PUBLICATION CHARGES  
SC SUPPORT SERVICES CONTRACTS  
SM SUBSCRIPTIONS TO MAGAZINES  
SO SUPPORT CONTRACTS WITH SUPPLY OFFICE  
SS SUPPORT SALARY  
SU SUPPLIES  
TB TELEPHONE BILLS  
TD TRAVEL DOMESTIC (U.S. AND CANADA)  
TO TRAVEL OVERSEAS  
TR TRANSFER RESPONSIBILITY (SUBSIDIARY ACCOUNT FUNDS)  
TY TYPING SERVICES OUTSIDE NPS

-----  
NOTES:

FILE: OPTAR AND RESEARCH



-----  
DATA ELEMENT NAME: CITY

-----  
ALIASES:

-----  
ASSIGNED BY:

-----  
VALUES AND MEANINGS: S.D.

SYSTEMS DESIGNER SHOULD SET SOME ARBITRARY LENGTH, i.e.  
15 CHARACTERS

-----  
NOTES:

DATA FLOW: PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S): ADDRESS



-----  
DATA ELEMENT NAME: CIVILIAN-BILLETS-BY-QUARTER  
-----

ALIASES:  
-----

ASSIGNED BY: DIRECTOR OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS: INDICATION OF ASSIGNMENT OF  
INSTRUCTORS DURING THE ACADEMIC QUARTERS.

-----  
NOTES:

DATA FLOW: BILLET LISTING



-----  
DATA ELEMENT NAME:        CODE  
-----

ALIASES:  
-----

ASSIGNED BY:    ADMINISTRATIVE OFFICER/DEPARTMENT  
-----

VALUES AND MEANINGS:    CODE ASSIGNED FOR A MAIL ROUTING

PURPOSE TO FACILITATE DELIVERY, i.e.,

54        ADMINISTRATIVE SCIENCES DEPARTMENT CHAIRMAN

00        SUPERINTENDENT, NAVAL POSTGRADUATE SCHOOL

-----  
NOTES:

DATA FLOW:    FACULTY EMPLOYMENT WORKSHEET AND MANY MORE.





-----  
DATA ELEMENT NAME:       COMMERCIAL-INTERESTS  
-----

ALIASES:  
-----

ASSIGNED BY:       EMPLOYEE  
-----

VALUES AND MEANINGS:   EXTERNAL ACTIVITY OF EMPLOYEE THAT IS  
MADE KNOWN TO THE DEPARTMENT FOR POSSIBLE MUTUAL USE,  
i.e., TAX SERVICE, SILK SCREEN ARTIST.

-----  
NOTES:

FILE:   PERSONNEL

SUBJECT OF DATA ELEMENT(S):   BIOGRAPHIC



-----  
DATA ELEMENT NAME:        COMMUNICATIONS  
-----

ALIASES:  
-----

ASSIGNED BY:    DEPARTMENT  
-----

VALUES AND MEANINGS:    BUDGET ESTIMATE IN DOLLARS

-----  
NOTES:

DATA FLOW:    BUDGET REQUEST

SUBSET OF DATA ELEMENT(S):    DESCRIPTION/BUDGET-ELEMENT



-----  
DATA ELEMENT NAME:        COMPUTER-RESOURCES  
-----

ALIASES:            COMPUTER-RESOURCES-REQUIRED  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    ESTIMATE OF COMPUTER RESOURCES IN  
                          TERMS OF DOLLARS DURING RESEARCH TASK.

-----  
NOTES:

DILE:    RESEARCH PROPOSAL

DATA FLOW:    RESEARCH PROPOSAL



-----  
DATA ELEMENT NAME: CONTINUING-EDUCATION-ACTIVITY  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: EFFORTS BY FACULTY FOR THE CONTINUING  
EDUCATION DEPARTMENT, EXPRESSED IN NARRATIVE TEXT.

-----  
NOTES:

FILE: FACULTY

DATA FLOW: FACULTY ACTIVITY REPORT

SUBSET OF DATA ELEMENT(S): INSTRUCTIONAL ACTIVITIES





-----  
DATA ELEMENT NAME: COST  
-----

ALIASES: PRICE, ACQUISITION COST  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: DOLLAR VALUATION ON COMMODITY OR  
SERVICE.

-----  
NOTES:

FILE: EQUIPMENT

DATA FLOW: LABOR SAVINGS DEVICE REPORT, MATERIAL TURN  
IN REQUEST, READY SUPPLY STORES REQUEST



-----  
DATA ELEMENT NAME: COSTC  
-----

ALIASES: COST CODE  
-----

ASSIGNED BY: COMPTROLLER  
-----

VALUES AND MEANINGS: ARBITRARY, UNIQUE DESIGNATION FOR  
A SPECIFIC, REIMBURSABLE FUND, i.e.,  
RABCD

-----  
NOTES:

FILE: FACULTY, RESEARCH, SUPPORT-PERSONNEL-WORK-  
SCHEDULE

DATA FLOW: JOB-ORDER-CHARGES, AMONG OTHERS

SUBSET OF DATA ELEMENT(S): RESEARCH



-----  
DATA ELEMENT NAME:        COURSE-COORDINATOR  
-----

ALIASES:  
-----

ASSIGNED BY:            DEPARTMENT  
-----

VALUES AND MEANINGS:    NAME OF PROFESSOR WHO IS ASSIGNED  
                             THE TASK OF COORDINATING COURSE  
                             MATERIALS AND INSTRUCTORS, I.E.,  
                             BISHOP

-----  
NOTES:

FILE:    COURSE

DATA FLOW:    COURSE JOURNAL



-----  
DATA ELEMENT NAME:        COURSE-HISTORY  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= {AY-ATR + COURSE-NUMBER + NO-STU + NO-SEGMENTS +  
    GRADE-DISTRIBUTION + SOF + TEXTBOOK-USED + TEACHING-  
    LOAD }

-----  
NOTES:

FILE:    FACULTY

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    TEACHING

SECONDARY KEY





-----  
DATA ELEMENT NAME:        COURSE-NAME  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    S.D.,I.E., FINANCIAL ACCOUNTING

-----  
NOTES:

FILE:    COURSE

DATA FLOW:    FACULTY COURSE DATA

SUBSET OF DATA ELEMENT(S):    COURSES-OFFERED



-----  
DATA ELEMENT NAME:        COURSE-NUMBER  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    ARBITRARY NUMBERING SYSTEM

6 CHARACTERS:    AANNNN, I.E.,

AA, i.e., AS,    IS,    MN

NNNN, i.e., 3105, 4183

-----  
NOTES:

FILE:    COURSE

DATA FLOW:    FACULTY COURSE DATA, QUARTERLY COURSE LOAD

SUBSET OF DATA ELEMENT(S):    COURSE-HISTORY, COURSE-

PREFERENCE, COURSES-OFFERED



-----  
DATA ELEMENT NAME:        COURSE-PREFERENCE  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

{ COURSE-NUMBER + QUARTER-OFFERED + FREQUENCY-ASSIGNED }

-----  
NOTES:

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    TEACHING



-----  
DATA ELEMENT NAME: COURSE/LABORATORY-DEVELOPMENT  
-----

ALIASES:  
-----

ASSIGNED BY: INSTRUCTOR  
-----

VALUES AND MEANINGS: NARRATIVE BY PROFESSOR DESCRIBING  
ACTIVITIES IN COURSE DEVELOPMENT.

-----  
NOTES:

FILE: FACULTY

DATA FLOW: FACULTY ACTIVITY REPORT

SUBSET OF DATA ELEMENT(S): INSTRUCTIONAL-ACTIVITIES





-----  
DATA ELEMENT NAME: COURSES-OFFERED  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

= 1{ AY-QTR + { COURSE-NAME + COURSE-NUMBER } } 4

-----  
NOTES:

SUBSET OF DATA ELEMENT(S): INSTRUCTIONAL-ACTIVITIES



-----  
DATA ELEMENT NAME:       COURSES-REQUESTED  
-----

ALIASES:  
-----

ASSIGNED BY:       INSTRUCTORS  
-----

VALUES AND MEANINGS:

      = { COURSE-NAME + COURSE-NUMBER + { AY-QTR } }

-----  
NOTES:

      FILE:   FACULTY

      DATA FLOW:   PERSONAL PREFERENCE REPORT



-----  
DATA ELEMENT NAME: CPO-DATA  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= NAME + SSN + EMPLOYEE-NUMBER + AUTHORIZED-SIGNATURE  
+ ACTIVITY-SERVICE-COMPUTATION-DATE + TYPE-APPOINT-  
MENT + (LIMITED-APPOINTMENT) + (PROBATION-PERIOD)

-----  
NOTES:

FILE: PERSONNEL

SECONDARY\_KEY



-----  
DATA ELEMENT NAME: CREDIT-HOURS  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

2 NUMERIC CHARACTERS OF THE FORM X-Y, WHERE

X = NUMBER OF LECTURE HOURS PER WEEK, AND

Y = NUMBER OF LABORATORY HOURS PER WEEK.

-----  
NOTES:

THE NUMBER OF CREDITS EARNED BY A STUDENT IS CALCU-

BY THE EQUATION:  $\text{CREDITS} = X + 0.5Y$

FILE: COURSE





-----  
DATA ELEMENT NAME: CURRICULUM  
-----

ALIASES:  
-----

ASSIGNED BY: PROVOST  
-----

VALUES AND MEANINGS: ARBITRARY, NUMERICAL DESIGNATION OF  
A PROGRAM OF STUDY AT NPS, I.E.,

813 MATERIAL MOVEMENT

367 COMPUTER SYSTEMS MANAGEMENT

-----  
NOTES:

SUBSET OF DATA ELEMENT(S): SOF



-----  
DATA ELEMENT NAME: CURRICULUM-CODE  
-----

ALIASES:  
-----

ASSIGNED BY: DIRECTOR OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS: CODE USED TO DESIGNATE THE CURRICULUM  
OF STUDENTS IN QUARTERLY PROJECTIONS, I.E.,

<u>CODE</u>	<u>CURRICULUM</u>
PL	367
CS	368
MF	813
MH	857
MT	814
MK	817 (INTERNATIONAL)
MP	847
MR	815
MS	817 (COAST GUARD)
MI	819
ME	817 (USMC)
MV	827
MM	813
MO	817 (ARMY)

-----  
NOTES:

DATA FLOW: ANNUAL/QUARTERLY COURSE LOAD



-----  
DATA ELEMENT NAME: CURRICULUM-DEGREE  
-----

ALIASES:  
-----

ASSIGNED BY: PROVOST  
-----

VALUES AND MEANINGS:

= CURRICULUM-CODE + DEGREE-CODE

DEGREE-CODE = MS

-----  
NOTES:

DATA FLOW: QUARTERLY-COURSE-LOAD



-----  
DATA ELEMENT NAME:        DATE  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:    S.D.

-----  
NOTES:

FILE:    OPTAR, RESEARCH

DATA FLOW:    STATUS OF FUNDS REPORT AND MANY MORE





-----  
DATA ELEMENT NAME:     DATE-OF-EQUIVALENT-INCREASE  
-----

ALIASES:  
-----

ASSIGNED BY:     CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:

=  
      [ DATE-OF-INITIAL-APPOINTMENT     ]

-----  
NOTES:

DATA FLOW:   SF-50

SUBSET OF DATA ELEMENT(S):   NPS-PROMOTION-HISTORY



-----  
DATA ELEMENT NAME:       DATE-OF-LAST-UPDATE  
-----

ALIASES:  
-----

ASSIGNED BY:       COMPTROLLER  
-----

VALUES AND MEANINGS:   NUMERIC, 6 DIGITS, I.E., 101083

-----  
NOTES:

FILE:   OPTAR, RESEARCH



-----  
DATA ELEMENT NAME:       DATE-OF-RANK  
-----

ALIASES:  
-----

ASSIGNED BY:     NAVY-MILITARY-PERSONNEL-COMMAND  
-----

VALUES AND MEANINGS:   DATE THAT THE LATEST PROMOTION WAS  
                  EFFECTIVE, I.E.,   1 JUNE 71

-----  
NOTES:

SUBSET OF DATA ELEMENT(S):   MILPERS-INFO



-----  
DATA ELEMENT NAME: DATES  
-----

ALIASES: INCLUSIVE-DATES  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: Self Defining, i.e.,

1 JULY 83 - 10 OCT 83

-----  
NOTES:

FILE: SUPPORT-PERSONNEL-WORK-SCHEDULE

DATA FLOW: JOB ORDER CHARGES





-----  
DATA ELEMENT NAME: DAYS

-----  
ALIASES:

-----  
ASSIGNED BY: DEPARTMENT

-----  
VALUES AND MEANINGS: NUMERIC

-----  
NOTES:

DATA FLOW: JOB ORDER CHARGES



-----  
DATA ELEMENT NAME:       DEGREE  
-----

ALIASES:  
-----

ASSIGNED BY:       PROVOST  
-----

VALUES AND MEANINGS:

      I.E.       BS

              MS

              PHD

-----  
NOTES:

      SUBSET OF DATA ELEMENT(S):   DEGREE-HISTORY



-----  
DATA ELEMENT NAME:       DEGREE-HISTORY  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= { DEGREE + MAJOR + INSTITUTION + YEAR-AWARDED }

-----  
NOTES:

FILE: PERSONNEL

DATA FLOW: PERSONAL BIOGRAPHY, FACULTY AVAILABILITY  
REPORT

SUBSET OF DATA ELEMENT(S): BIOGRAPHIC



-----  
DATA ELEMENT NAME:        DEMAND  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    NUMBER OF UNITS ( IN TERMS OF THE  
                          DEFINED UNIT OF ISSUE, I.E., "EACH" ) USED DURING THE  
                          CURRENT FISCAL YEAR

-----  
NOTES:

DEMAND IS INCREMENTED BY THE TOTAL CURRENT RECEIPT  
OF MATERIAL ( IN SUPPLY TERMS - THE MATERIAL IS EXPENDED  
UPON RECEIPT). THIS DEMAND FIGURE, ALONG WITH THE  
"PREVIOUS DEMAND" FIGURE IS USED TO COMPLETE THE FOLLOW-  
ING YEAR'S BUDGET ESTIMATE. THE ACTUAL REORDER IS  
ACCOMPLISHED BY VISUAL INVENTORYING THE MATERIAL STOCK  
LOCATION.

FILE:    SUPPLIES





-----  
DATA ELEMENT NAME:       DEPT  
-----

ALIASES:       DEPARTMENT;   DEPARTMENT-OFFICE  
-----

ASSIGNED BY:       ADMINISTRATIVE OFFICER  
-----

VALUES AND MEANINGS:   NUMERICAL CODE, 2 DIGITS, INDICATING

THE MAILING (ROUTING) CODE FOR THE DEPARTMENT, I.E.,

54       ADMINISTRATIVE SCIENCES DEPARTMENT

55       OPERATIONS RESEARCH DEPARTMENT

-----  
NOTES:

DATA FLOW:   BUDGET REQUEST, LABOR SAVINGS DEVICES  
              REPORT, PLANT ACCOUNT REPORT.



-----  
DATA ELEMENT NAME:        DESCRIPTION

-----  
ALIASES:

-----  
ASSIGNED BY:        DEPARTMENT

-----  
VALUES AND MEANINGS:

IN WORK REQUEST:    DESCRIPTION OF THE WORK REQUESTED AND  
                                 THE JUSTIFICATION FOR IT.

IN STATUS OF FUNDS REPORT:   DESCRIPTION OF THE FINANCIAL  
                                 OBLIGATION, I.E.,  
                                 3M COMPANY TRANSPARANCIES,  
                                 PROF SMITH TAD.

IN READY SUPPLY STORE REQUEST:   DESCRIPTION OF ITEM OF

-----  
NOTES:

DATA FLOW:    WORK REQUEST, STATUS OF FUNDS, READY SUPPLY  
                 STORE REQUEST.

SUBSET OF DATA ELEMENT(S):   ITEM-DESCRIPTION,  
                 STOCK-NO-AND-DESCRIPTION.



-----  
DATA ELEMENT NAME:      DESCRIPTION/BUDGET-ELEMENT  
-----

ALIASES:  
-----

ASSIGNED BY:            DEPARTMENT  
-----

VALUES AND MEANINGS:

=      FACULTY-TAD + AACSB/NASPA-MEMBERSHIP-FEES +  
         UTILITIES-RENTAL-OF-EQUIPMENT + (COMMUNICATIONS) +  
         EQUIPMENT-MAINTENANCE + OTHER-PURCHASED-SERVICES +  
         SUPPLIES (<\$200) + EQUIPMENT (\$200>\$<\$3000) +  
         PURCHASED-PRINTING + TOTAL

-----  
NOTES:

DATA FLOW:    BUDGET REQUEST



-----  
DATA ELEMENT NAME:       DOCUMENT-NUMBER  
-----

ALIASES:       STUB-NUMBER  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:

    = SERVICE-CODE + REQUISITIONER + STUB-NUMBER

        X       SERVICE-CODE

        62271 REQUISITIONER

-----  
NOTES:

    SERIAL NUMBER SEQUENCE OF STUB-NUMBER IAW NPS NOTE

    4235 (SERIES)





-----  
DATA ELEMENT NAME:       EFFECTIVE-DATES  
-----

ALIASES:  
-----

ASSIGNED BY:       DEAN OF ACADEMIC ADMINISTRATION  
-----

VALUES AND MEANINGS:   INCLUSIVE DATES OF ACADEMIC QUARTER  
                          LESS FINAL EXAM PERIOD.

-----  
NOTES:

DATA FLOW:   MASTER SCHEDULE



-----  
DATA ELEMENT NAME:       EMPLOYEE-DATA  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

      SUPPORT-PERSONNEL  
= [                                ]  
      FACULTY

SUPPORT-PERSONNEL = NAME + BILLET-NO + PD/JD-NO +  
                                  POSITION-TITLE + GRADE-LEVEL +  
                                  TYPE-APPOINTMENT +

FACULTY = PROF + ACADEMIC-DISCIPLINE + TYPE-APPOINTMENT  
          + GRADE-LEVEL + POSITION-TITLE +  
          LIMITED-APPOINTMENT LIMITED-APPOINTMENT.

-----  
NOTES:

DATA FLOW:   RESOURCE DATA DISPLAY



-----  
DATA ELEMENT NAME: EMPLOYEE-NUMBER  
-----

ALIASES: PAY-NUMBER  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: ARBITRARY NUMBER TO IDENTIFY EMPLOYEE

I.E., AO6555

-----  
NOTES:

FILE: BILLET, FACULTY, FACULTY EMPLOYMENT, SPACE,  
SUPPORT-PERSONNEL-WORK-SCHEDULE

DATA FLOW: OVERTIME REQUEST, TIME CARDS, JOB ORDER  
CARD

SUBSET OF DATA ELEMENT(S): CPO-DATA



-----  
DATA ELEMENT NAME:       EMPLOYMENT-SCHEDULE  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:

= INCLUSIVE-DATES + FUNDING-SOURCE + NO-DAYS

I.E.,

01 OCT 82 - 11 JUN 83 (O MN )	181
12 JUN 83 - 01 AUG 83 (RGXWR)	36
02 AUG 83 - 31 SEP 83 ( XXX )	44

XXX       UNFUNDED, AS YET.

-----  
NOTES:

FILE:   FACULTY EMPLOYMENT SCHEDULE

DATA FLOW:   FACULTY EMPLOYMENT SCHEDULE





-----  
DATA ELEMENT NAME:       EOQ

-----  
ALIASES:       ECONOMIC ORDER QUANTITY

-----  
ASSIGNED BY:       DEPARTMENT

-----  
VALUES AND MEANINGS:   QUANTITY OF STOCK THAT MINIMIZES  
                          COSTS, USUALLY THE COST OF PROCUREMENT AND THE COST  
                          TO WAREHOUSE THE ITEM; IT IS EXPRESSED IN NUMERICS,  
                          PROBABLY LESS THAN 4 DIGITS.

-----  
NOTES:

STANDARD EOQ FORMULA FROM HADLEY AND WHITIN MAY BE USED

FILE:   SUPPLIES



-----  
DATA ELEMENT NAME: EQUIPMENT (\$200>\$<\$3000)  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: BUDGET LINE ITEM, EXPRESSED IN DOLLARS

-----  
NOTES:

DATA FLOW: BUDGET REQUEST

SUBSET OF DATA ELEMENT(S): DESCRIPTION/BUDGET-ELEMENT,  
ITEMS.



-----  
DATA ELEMENT NAME:       EQUIPMENT-DATA  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= NOMENCLATURE + MAKE/MODEL + SERIAL-NUMBER + PLANT-  
ACCOUNT-NUMBER

-----  
NOTES:

SUBSET OF DATA ELEMENT(S):   SPACE-DATA



-----  
DATA ELEMENT NAME: EQUIPMENT-MAINTENANCE  
-----

ALIASES: MAINTENANCE  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: BUDGET LINE ITEM EXPRESSED IN DOLLARS;

IT IS THE CONTRACT VALUE FOR AN OUTSIDE AGENCY TO  
PERFORM THE MAINTENANCE ON THE DEPARTMENT'S EQUIPMENT.

-----  
NOTES:

DATA FLOW: BUDGET REQUEST

SUBSET OF DATA ELEMENT(S): DESCRIPTION/BUDGET-  
ELEMENT, ITEMS





-----  
DATA ELEMENT NAME: ESTIMATED-COST  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

= TRANSPORTATION-COST + PER-DIEM + MISC-EXP

-----  
NOTES:

DATA FLOW: TRAVEL ORDERS



-----  
DATA ELEMENT NAME: EXAM-WEEK  
-----

ALIASES: FINAL-EXAM-PERIOD  
-----

ASSIGNED BY: DEAN OF ACADEMIC ADMINISTRATION  
-----

VALUES AND MEANINGS: INCLUSIVE DATES OF EXAM WEEK, I.E.,  
23 - 29 SEPTEMBER.

-----  
NOTES:

DATA FLOW: MASTER SCHEDULE



-----  
DATA ELEMENT NAME:       EXPIRES  
-----

ALIASES:  
-----

ASSIGNED BY:       DEAN OF RESEARCH  
-----

VALUES AND MEANINGS:   DATE AFTER WHICH OBLICATIONS AGAINST  
                  A RESEARCH ACCOUNT MAY NOT BE MADE:   EXPRESSED AS A  
                  CALENDAR DATE, I.E., 1 OCT 1985.

-----  
NOTES:

FILE:   RESEARCH

SUBSET OF DATA ELEMENT(S):   RESEARCH



-----  
DATA ELEMENT NAME: FAC-HRS  
-----

ALIASES: FACULTY-HOURS  
-----

ASSIGNED BY: DEAN OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS: NUMERIC, 1 OR 2 DIGITS: FORECAST OF  
THE NUMBER OF FACULTY TEACHING HOURS REQUIRED FOR A  
SPECIFIC COURSE.

-----  
NOTES:

DATA FLOW: ANNUAL COURSE LOAD





-----  
DATA ELEMENT NAME: FACULTY

-----  
ALIASES: PROF, FACULTY-MEMBER

-----  
ASSIGNED BY: DEPARTMENT

-----  
VALUES AND MEANINGS: LAST NAME ( FIRST NAME/INITIALS ARE  
OPTIONAL) OF INSTRUCTOR.

-----  
NOTES: MOST NAMES LISTED UNDER DATA ELEMENT ENTITLED "PROF"  
DATA FLOW: FACULTY CERTIFICATION REPORT, FACULTY  
EMPLOYMENT SCHEDULE



-----  
DATA ELEMENT NAME: FACULTY-APPOINTMENTS-CURRENT-RANK  
-----

ALIASES:  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: NUMERIC INDICATING THE NUMBER OF  
TIMES THAT A PROFESSOR HAS BEEN APPOINTED TO HIS  
CURRENT POSITION.

-----  
NOTES:

FILE: FACULTY

DATA FLOW: CPO-LISTING, FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME: FACULTY-INITIAL-RANK  
-----

ALIASES:  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: THE FACULTY RANK OF AN INSTRUCTOR  
WHEN FIRST EMPLOYED AT NPS, I.E., ASSOCIATE PROFESSOR.

-----  
NOTES:

FILE: FACULTY

DATA FLOW: CPO LISTING, FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME: FACULTY-TAD  
-----

ALIASES: TRAVEL (NPS)  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: BUDGET LINE ITEM FOR FACULTY TRAVEL,  
EXPRESSED IN DOLLARS.

-----  
NOTES:

DATA FLOW: BUDGET REQUEST

SUBSET OF DATA ELEMENT(S): DESCRIPTION/BUDGET-  
ELEMENT, ITEMS





-----  
DATA ELEMENT NAME: FACULTY-YEARS-OF-EXPERIENCE  
-----

ALIASES:  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: NUMERIC LESS THAN 3 DIGITS.

-----  
NOTES:

FILE: FACULTY

DATA FLOW: CPO LISTING, FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME:        FINAL-EXAM  
-----

ALIASES:  
-----

ASSIGNED BY:        DEAN OF ACADEMIC ADMINISTRATION  
-----

VALUES AND MEANINGS:   GIVES THE TIME AND LOCATION OF THE  
                         FINAL EXAM DURING EXAM WEEK.

FINAL-EXAM = PERIOD + ROOM

         I.E.,        1,2 EXAM   I-288

-----  
NOTES:

DATA FLOW:   MASTER SCHEDULE



-----  
DATA ELEMENT NAME: FINAL-EXAM-PERIOD  
-----

ALIASES: EXAM-WEEK  
-----

ASSIGNED BY: DEAN OF ACADEMIC ADMINISTRATION  
-----

VALUES AND MEANINGS: INCLUSIVE DATES, AT THE END OF A  
QUARTER, THAT FINAL EXAMS MAY BE SCHEDULED, I.E.,  
20 - 26 SEPTEMBER 1983.

-----  
NOTES:

DATA FLOW: MASTER SCHEDULE



-----  
DATA ELEMENT NAME:        FIRM  
-----

ALIASES:  
-----

ASSIGNED BY:        EMPLOYEE  
-----

VALUES AND MEANINGS:    NAME OF THE COMMERCIAL ESTABLISHMENT  
                          WHERE THE EMPLOYEE WAS FORMERLY EMPLOYED, I.E.,  
                          WESTINGHOUSE.

-----  
NOTES:

SUBSET OF DATA ELEMENT(S):    WORK-HISTORY





-----  
DATA ELEMENT NAME:        FREQUENCY-ASSIGNED  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    THE NUMBER OF TIMES THAT A SPECIFIC  
                         INSTRUCTOR HAS BEEN ASSIGNED TO TEACH A SPECIFIC  
                         COURSE.

-----  
NOTES:

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    COURSE-PREFERENCE



-----  
DATA ELEMENT NAME:           FUNDING-SOURCE  
-----

ALIASES:  
-----

ASSIGNED BY:           COMPTROLLER/DEPARTMENT  
-----

VALUES AND MEANINGS:   THE FINANCIAL ACCOUNT THAT MAY BE  
                          CHARGED FOR A FINANCIAL OBLIGATION, I.E., WAGES.

EXAMPLES:

FOUND	NPS RESEARCH FOUNDATION
RABCD	REIMBURSABLE SPONSOR, I.E., OFFICE OF NAVAL RESEARCH.
XXX	UNFUNDED

-----  
NOTES:

DATA FLOW:   FACULTY EMPLOYMENT SCHEDULE

SUBSET OF DATA ELEMENT(S):   EMPLOYMENT-SCHEDULE



-----  
DATA ELEMENT NAME: FURNITURE/SIGNS  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: BUDGET ELEMENT FOR A PARTICULAR  
CATEGORY OF EXPENSE, EXPRESSED IN DOLLARS.

-----  
NOTES:

DATA FLOW: BUDGET REQUEST

SUBSET OF DATA ELEMENT(S): ITEMS



-----  
DATA ELEMENT NAME:       GRADE-DISTRIBUTION  
-----

ALIASES:  
-----

ASSIGNED BY:       INSTRUCTOR  
-----

VALUES AND MEANINGS:   SHOWS THE DISTRIBUTION OF GRADES FOR  
A SPECIFIC COURSE.

GRADE-DISTRIBUTION = A + A- + B+ + B + B- + C+ + C + C-  
                          + D+ + D + X + COMPOSITE-QPR

-----  
NOTES:

DATA FLOW:   COURSE JOURNAL, FACULTY AVAILABILITY REPORT  
SUBSET OF DATA ELEMENT(S):   COURSE-HISTORY





-----  
DATA ELEMENT NAME:       GRADE-LEVEL  
-----

ALIASES:           PAY-GRADE  
-----

ASSIGNED BY:       DEPARTMENT/CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:   NUMERICAL DESIGNATION OF EMPLOYEE'S  
                  PAY LEVEL, I.E., 07, 11.

-----  
NOTES:

DATA FLOW:   SF-50, CPO-LISTING, FACULTY AVAILABILITY  
                  REPORT

SUBSET OF DATA ELEMENT(S):   EMPLOYEE-DATA, NPS-PROMO-  
                  TION-HISTORY



-----  
DATA ELEMENT NAME:       HPW  
-----

ALIASES:           HOURS-PER-WEEK  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   THE NUMBER OF HOURS PER WEEK THAT A  
                          SUPPORT PERSON WILL WORK.

-----  
NOTES:

FILE:   SUPPORT-PERSONNEL-EMPLOYMENT-SCHEDULE

DATA FLOW:   JOB ORDER CHARGES



-----  
DATA ELEMENT NAME: INCLUSIVE-DATES  
-----

ALIASES: DATES  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: THE BEGINNING AND ENDING DATES FOR  
AN EVENT OR SERIES OF EVENTS.

INCLUSIVE-DATES = DAY + MONTH + YEAR - DAY +MONTH+YEAR

-----  
NOTES:

DATA FLOW: FACULTY EMPLOYMENT SCHEDULE, FACULTY  
AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S): EMPLOYMENT-SCHEDULE,  
PREVIOUS-ACADEMIC-ASSIGNMENTS, PROFESSIONAL, WORK-  
HISTORY.



-----  
DATA ELEMENT NAME:        INCLUSIVE-TIMES  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:   BEGINNING AND ENDING TIME FOR AN EVENT

= HOUR + DATE - HOUR + DATE, I.E.,  
1630, 27 OCT - 2030, 27 Oct 1983

-----  
NOTES:

DATA FLOW:   OVERTIME REQUEST





-----  
DATA ELEMENT NAME:       INSTITUTION  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT, EMPLOYEE  
-----

VALUES AND MEANINGS:   NAME OF ACADEMIC ORGANIZATION, I.E.,  
                          STANFORD, UNIVERSITY OF CALIFORNIA, BERKLEY.

-----  
NOTES:

DATA FLOW:   FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   DEGREE-HISTORY, PREVIOUS-  
                          ACADEMIC-ASSIGNMENTS, WORK-HISTORY



-----  
DATA ELEMENT NAME:           INSTRUCTIONAL-ACTIVITIES  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= { COURSES-OFFERED } + { COURSE/LABORATORY-DEVELOPMENT }  
+ { CONTINUING-EDUCATION-ACTIVITY } + { THESIS } +  
+ { SELF-IMPROVEMENT-EFFORTS }

-----  
NOTES:

DATA FLOW:   FACULTY ACTIVITY REPORT



-----  
DATA ELEMENT NAME:       ISSUE/TURN-IN  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:

ISSUE = MATERIAL REQUEST TO OBTAIN OFFICE SUPPLIES.

TURN-IN = MATERIAL BEING RETURNED FOR CREDIT.

-----  
NOTES:

DATA FLOW:   READY SUPPLY STORE REQUEST



-----  
DATA ELEMENT NAME:           ITEM  
-----

ALIASES:  
-----

ASSIGNED BY:           DEPARTMENT  
-----

VALUES AND MEANINGS:   SUBSIDIARY CATEGORY OF FINANCIAL  
                          OBLIGATIONS

- 1    MAINTENANCE
- 2    SUPPLIES
- 3    FURNITURE/SIGNS
- 4    TRAVEL (NPS)
- 5    ASSOCIATION-FEES
- 6    RECRUITING
- 7    SUBSCRIPTIONS/BOOKS
- 8    DEPT-NEWSLETTER
- 9    EQUIPMENT
- 10   ADMIN-SUPPORT
- 11   SEC-SUPPORT
- 12   RESEARCH-TAPES

-----  
NOTES:

CURRENT MANUAL LEDGER ARE SUBDIVIDED INTO SUBSIDIARY  
LEDGERS.

FILE:   OPTAR





-----  
DATA ELEMENT NAME:       ITEM-DESCRIPTION  
-----

ALIASES:  
-----

ASSIGNED BY:       COMPTROLLER  
-----

VALUES AND MEANINGS:

= DESCRIPTION + RESEARCH-ACCOUNT, I.E.,

OFFICE PRODUCTS

FROM ELSTER4

-----  
NOTES:

FILE:   OPTAR, RESEARCH

DATA FLOW:   STATUS OF FUNDS REPORT



-----  
DATA ELEMENT NAME:       ITEMS  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= MAINTENANCE + SUPPLIES + (FURNITURE/SIGNS) +  
FACULTY-TAD + AACSB/NASPA-MEMBERSHIP-FEES + SUB-  
SCRIPTION/BOOKS + EQUIPMENT + ADMIN-SUPPORT

-----  
NOTES:   THIS DATA ELEMENT IS A COMPOSITE OF THE PREVIOUS  
DATA ELEMENT CALLED ITEM, WHICH COULD BE ONE OF  
MANY OF THE ITEMS.

DATA FLOW:   BUDGET REQUEST, OPTAR BUDGET EXPENDITURES



-----  
DATA ELEMENT NAME:       JOB-ORDER-NUMBER  
-----

ALIASES:   COSTC, SUPPLEMENTARY-ADDRESS  
-----

ASSIGNED BY:       COMPTROLLER  
-----

VALUES AND MEANINGS:   UNIQUE ALPHA CHARACTERS, DESIGNATING  
                         FINANCIAL ACCOUNT

ABCDE

RDDCC

-----  
NOTES:

DATA FLOW:   JOB ORDER CARD, OVERTIME REQUEST,  
              REQUISITIONS



-----  
DATA ELEMENT NAME: JUL

-----  
ALIASES: JULIAN-DATE

-----  
ASSIGNED BY: DEPARTMENT, COMPTROLLER

-----  
VALUES AND MEANINGS: JULIAN DATE OF TRANSACTION

JULIAN-DATE = XYYY

X = LAST DIGIT OF CALENDAR YEAR

YYY = SEQUENTIAL DAY OF THE YEAR

I.E.,  
4031 = 31 JANUARY 1984

3235 = 23 AUGUST 1983

-----  
NOTES: INDICATES THE DATE THAT THE REQUISITION WAS SUB-  
MITTED, OR THE DATE OF THE LAST UPDATE OF THE RECORD  
DATA FLOW: REQUISITION, SPACE-UTILIZATION-REPORT  
SUBSET OF DATA ELEMENT(S): DOCUMENT-NUMBER





-----  
DATA ELEMENT NAME: JUSTIFICATION  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: NARRATIVE THAT SUPPLIES REASON(S) FOR  
AN ACTION.

-----  
NOTES:

DATA FLOW: OVERTIME REQUEST, RESEARCH PROPOSAL



-----  
DATA ELEMENT NAME: KLMNOP  
-----

ALIASES:  
-----

ASSIGNED BY: FACILITIES PLANNING BOARD  
-----

VALUES AND MEANINGS: COLUMN HEADING OF REPORT TO INDICATE  
THE RESPONSIBLE DEPARTMENT, I.E.,  
PW  
A/S  
COMCEN  
EDMEDIA

-----  
NOTES:

DATA FLOW: SPACE UTILIZATION REPORT



-----  
DATA ELEMENT NAME:        LABOR  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT/PROFESSOR  
-----

VALUES AND MEANINGS:    AMOUNT OF DOLLARS ESTIMATED AS BEING  
                              NECESSARY TO CONDUCT THE RESEARCH ACTIVITY.

-----  
NOTES:

FILE:    RESEARCH

DATA FLOW:    RESEARCH PROPOSAL



-----  
DATA ELEMENT NAME:        LABORATORY-SPACE  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    ESTIMATE OF NPS RESOURCES REQUIRED  
                         TO CONDUCT RESEARCH;    EXPRESSED IN DOLLARS.

-----  
NOTES:

FILE:    RESEARCH PROPOSAL

DATA FLOW:    RESEARCH PROPOSAL





-----  
DATA ELEMENT NAME: LEAVE-HOURS  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: NUMBER OF HOURS OF LEAVE TAKEN BY  
AN EMPLOYEE.

-----  
NOTES:

DATA FLOW: TIME CARD, JOB ORDER CARD



-----  
DATA ELEMENT NAME: LIBRARY-RESOURCES-REQR  
-----

ALIASES: LIBRARY-RESOURCES-REQUIRED  
-----

ASSIGNED BY: DEPARTMENT/PROFESSOR  
-----

VALUES AND MEANINGS: NPS LIBRARY RESOURCES REQUIRED TO  
CONDUCT RESEARCH, EXPRESSED IN DOLLARS.

-----  
NOTES:

FILE: RESEARCH PROPOSAL

DATA FLOW: RESEARCH PROPOSAL



-----  
DATA ELEMENT NAME: LIMITED-APPOINTMENTS  
-----

ALIASES:  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: EXPIRATION DATE OF APPOINTMENT TO  
A TEMPORARY, CIVILIAN POSITION.

= YEAR + MONTH + DAY, I.E., 831115

-----  
NOTES:

DATA FLOW: SF-50, CPO-LISTING, FACULTY AVAILABILITY  
REPORT

SUBSET OF DATA ELEMENT(S): CPO-DATA, EMPLOYEE-DATA



-----  
DATA ELEMENT NAME: LINEAL-NUMBER  
-----

ALIASES:  
-----

ASSIGNED BY: NAVAL MILITARY PERSONNEL COMMAND  
-----

VALUES AND MEANINGS: UNIQUE NUMBER, ASSIGNED TO A MILITARY  
OFFICER TO INDICATE THE OFFICER'S RELATIVE RANKING  
WITHIN THE SERVICE: NUMERIC, 7 DIGITS OR LESS.

-----  
NOTES:

DATA FLOW: MILPERS DATA

SUBSET OF DATA ELEMENT(S): MILPERS-INFO









-----  
DATA ELEMENT NAME: MAJOR  
-----

ALIASES:  
-----

ASSIGNED BY: UNIVERSITY  
-----

VALUES AND MEANINGS: ACADEMIC EMPHASIS AREA, I.E.,  
ECONOMICS,  
OPERATIONS RESEARCH.

-----  
NOTES:

DATA FLOW: PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S): DEGREE-HISTORY



-----  
DATA ELEMENT NAME:       MAKE/MODEL  
-----

ALIASES:  
-----

ASSIGNED BY:       MANUFACTURER  
-----

VALUES AND MEANINGS:   MEANS OF IDENTIFYING A PARTICULAR  
                          BRAND/TYPE OF EQUIPMENT;   CAN BE OF  
                          VARIOUS ALPHA-NUMERIC CONFIGURATIONS,  
                          DEPENDING ON THE MANUFACTURER'S NUM-  
                          BERING SCHEME.

-----  
NOTES:

FILE:   EQUIPMENT

DATA FLOW:   LABOR SAVINGS DEVICE REPORT

SUBSET OF DATA ELEMENT(S):   EQUIPMENT-DATA



-----  
DATA ELEMENT NAME:       MAN-YEARS  
-----

ALIASES:  
-----

ASSIGNED BY:       DEAN OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS:   STAFFING AUTHORIZATION FOR ONE PERSON  
                          OVER A YEAR'S TIME.

-----  
NOTES:

DATA FLOW:   BILLET LISTING





-----  
DATA ELEMENT NAME:        MARITAL-STATUS  
-----

ALIASES:  
-----

ASSIGNED BY:    EMPLOYEE  
-----

VALUES AND MEANINGS:    INDICATES IF AN EMPLOYEE IS MARRIED  
                                 OR NOT AND, POSSIBLY, THE NUMBER OF  
                                 CHILDREN, I.E.,  
                                 W2DC = WIFE AND 2 DEPENDENT CHILDREN.

-----  
NOTES:

DATA FLOW:    PERSONAL BIOGRAPHY, FACULTY AVAILABILITY  
                 REPORT.

SUBSET OF DATA ELEMENT(S):    BIO-DATA, BIOGRAPHIC



-----  
DATA ELEMENT NAME:           MEAN  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

	QUESTION	N/A	1	2	3	4	5	MEAN	SD
1	THE COURSE WAS WELL ORGANIZED	0	0	0	1	4	3	4.25	0.66
2	TIME IN THE CLASS WAS SPENT EFFECTIVELY	0	0	0	0	6	2	4.25	0.43
3	INSTRUCTOR SEEMED TO KNOW WHEN STUDENTS DID NOT UNDERSTAND THE MATERIAL	0	0	0	0	6	2	4.25	0.43
4	DIFFICULT CONCEPTS WERE MADE UNDERSTANDABLE	0	0	1	2	3	2	3.75	0.97
5	I HAD CONFIDENCE IN THE INSTRUCTORS KNOWLEDGE OF THE SUBJECT	0	0	0	0	6	2	4.25	0.43
6	I FELT FREE TO ASK QUESTIONS	0	0	0	0	2	6	4.75	0.43
7	INSTRUCTOR WAS PREPARED FOR CLASS	0	0	0	0	5	3	4.38	0.48
8	THE INSTRUCTOR OBJECTIVES FOR THE COURSE HAVE BEEN MADE CLEAR	0	0	1	0	4	3	4.13	0.93
9	THE INSTRUCTOR MADE THIS COURSE A WORTHWHILE LEARNING EXPERIENCE	0	0	0	2	4	2	4.00	0.71
10	THE INSTRUCTOR STIMULATED MY INTEREST IN THE SUBJECT AREA	0	0	0	4	3	1	3.63	0.70
11	INSTRUCTOR CARED ABOUT STUDENT PROGRESS AND DID HIS SHARE IN HELPING US TO LEARN	0	0	0	0	3	5	4.63	0.48

-----  
NOTES:   TABULATION OF SOF DATA

DATA FLOW:   SOF-DATA

SUBSET OF DATA ELEMENT(S):   SOF

          The above is an explanation of a portion  
          of a typical SOF Data Report.



-----  
DATA ELEMENT NAME:       MEAN (Q 1-Q11)  
-----

ALIASES:  
-----

ASSIGNED BY  
-----

VALUES AND MEANINGS:   MEAN OF 11 SOF QUESTIONS

I.E.,

Q1 TO Q11   MEAN   4.20

-----  
NOTES:   SUMMARY OF SOF DATA FOR THE FIRST 11 QUESTIONS

DATA FLOW:   SOF-DATA

SUBSET OF DATA ELEMENT(S):   SOF



-----  
DATA ELEMENT NAME:       MEAN (Q12)  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:  
-----

#	QUESTION	N/A	P	F	A	E	O	MEAN	S.D.
12	OVERALL, I WOULD RATE THE								
	INSTRUCTOR	0	0	0	1	4	3	4.25	0.66

-----  
NOTES:

DATA FLOW:   SOF-DATA

SUBSET OF DATA ELEMENT(S):   SOF





-----  
DATA ELEMENT NAME:       MEAN (Q13)  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

#           QUESTION

13 OVERALL, I WOULD RATE THIS COURSE 0 0 0 2 5 1   3.88   0.60

-----  
NOTES:

DATA FLOW:   SOF-DATA

SUBSET OF DATA ELEMENT(S):   SOF



-----  
DATA ELEMENT NAME:       MILITARY-FACULTY  
-----

ALIASES:  
-----

ASSIGNED BY:     DEAN OF ACADEMIC PLANNING/DEPARTMENT  
-----

VALUES AND MEANINGS:   NAMES OF THE MILITARY FACULTY, I.E.,  
                          GUYER  
                          LAMM  
                          FERRIS

-----  
NOTES:

DATA FLOW:   BILLET LISTING



-----  
DATA ELEMENT NAME: MILPERS-INFO  
-----

ALIASES:  
-----

ASSIGNED BY: NAVY MILITARY PERSONNEL COMMAND  
-----

VALUES AND MEANINGS:

= { RANK + SALARY + ( { PREVIOUS-ASSIGNMENTS} ) + LINEAL-  
NO + DATE-OF-RANK + ROTATION-DATE } .

-----  
NOTES:

FILE: PERSONNEL



-----  
DATA ELEMENT NAME: MQ  
-----

ALIASES: MAN-QUARTERS; DEPARTMENT-REIMBURSABLE-MAN-  
QUARTERS-PROJECTED  
-----

ASSIGNED BY: DEAN OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS: NUMERIC- NUMBER OF DIGITS NECESSARY  
TO PROJECT THE NUMBER OF EQUIVALENT INSTRUCTORS NEEDED  
PER QUARTER.

-----  
NOTES:

FILE: FACULTY EMPLOYMENT SCHEDULE

DATA FLOW: FACULTY EMPLOYMENT WORKSHEET





-----  
DATA ELEMENT NAME:       NAME  
-----

ALIASES:        PROF (FOR INSTRUCTORS)  
-----

ASSIGNED BY:       EMPLOYEE  
-----

VALUES AND MEANINGS:

NAME = LAST-NAME + FIRST-NAME + MIDDLE-NAME

-----  
NOTES:

DATA FLOW:   JOB ORDER CHARGES, JOB ORDER CARD, TIME  
              CARD, OVERTIME REQUEST

SUBSET OF DATA ELEMENT(S): CPO-DATA, EMPLOYEE-DATA



-----  
DATA ELEMENT NAME: NCC  
-----

ALIASES: NAVY-CATEGORY-CODE  
-----

ASSIGNED BY: PUBLIC WORKS  
-----

VALUES AND MEANINGS: ARBITRARY NUMERIC CODE ASSIGNED TO A  
SPACE TO INDICATE THE TYPE OF ASSIGNMENT, I.E.,

171-30

610-10

-----  
NOTES:

DATA FLOW: SPACE UTILIZATION REPORT



-----  
DATA ELEMENT NAME: NO-DAYS  
-----

ALIASES: NUMBER-OF-DAYS  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

TRAVEL-ORDERS = TRAVEL-DAYS + TEMPORARY-DUTY-DAYS +  
WEEKEND + LEAVE

FACULTY-EMPLOYMENT-SCHEDULE = ACTUAL NUMBER OF DAYS

-----  
NOTES:

DATA FLOW: TRAVEL ORDERS, FACULTY EMPLOYMENT SCHEDULE  
SUBSET OF DATA ELEMENT(S): EMPLOYMENT-SCHEDULE



---

DATA ELEMENT NAME: NO-HOURS

---

ALIASES: NUMBER-OF-HOURS

---

ASSIGNED BY: DEPARTMENT

---

VALUES AND MEANINGS: ACTUAL NUMBER OF HOURS REQUESTED

---

NOTES:

DATA FLOW: OVERTIME REQUEST





-----  
DATA ELEMENT NAME: NO-SEGMENTS  
-----

ALIASES: NUMBER OF SEGMENTS  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS: THE NUMBER OF INDIVIDUAL SEGMENTS OF  
A SPECIFIC COURSE THAT WAS OFFERED.

-----  
NOTES:

DATA FLOW: FACULTY AVAILABILITY REPORT, FACULTY COURSE  
DATA

SUBSET OF DATA ELEMENT(S): COURSE-HISTORY



-----  
DATA ELEMENT NAME: NO-STU  
-----

ALIASES: NUMBER-OF-STUDENTS  
-----

ASSIGNED BY: DEAN OF ACADEMIC ADMINISTRATION  
-----

VALUES AND MEANINGS: THE NUMBER OF STUDENTS THAT ARE  
PROJECTED BY THE CURRICULAR OFFICER TO BE ENROLLED  
IN THE SUBSEQUENT QUARTER(S).

-----  
NOTES:

DATA FLOW: ANNUAL/QUARTERLY-COURSE-LOAD

SUBSET OF DATA ELEMENT(S): COURSE-HISTORY



-----  
DATA ELEMENT NAME:       NOMENCLATURE  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   THE NAME OF AN ITEM OF SUPPLY OR A  
                         PIECE OF EQUIPMENT.

-----  
NOTES:

FILE:   EQUIPMENT, SUPPLIES

DATA FLOW:   LABOR SAVINGS DEVICE REPORT, MATERIAL TURN  
              IN REQUEST, PLANT ACCOUNT REPORT

SUBSET OF DATA ELEMENT(S):   EQUIPMENT-DATA



-----  
DATA ELEMENT NAME: NPS-PROMOTION-HISTORY  
-----

ALIASES:  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:

= { GRADE-LEVEL + SALARY-STEP + SALARY + DATE-OF-  
EQUIVALENT-INCREASE }

-----  
NOTES:

FILE: PERSONNEL

DATA FLOW: FACULTY AVAILABILITY REPORT, SF-52





-----  
DATA ELEMENT NAME:        NSN

-----  
ALIASES:        NATIONAL-STOCK-NUMBER

-----  
ASSIGNED BY:        DEFENSE LOGISTICS SERVICE CENTER

-----  
VALUES AND MEANINGS:

= FEDERAL-SUPPLY-CLASS + COUNTRY-CODE + NATIONAL-ITEM-  
IDENTIFIER ( OR NIIN)

FEDERAL-SUPPLY-CLASS = NNNN,        I.E., 7430

COUNTRY-CODE = 00 , OR 01.

NIIN = NNN-NNNN

-----  
NOTES:

FILE:    EQUIPMENT, SUPPLIES

DATA FLOW:    LABOR SAVINGS DEVICE REPORT, PLANT ACCOUNT  
              REPORT, REQUISITION

SUBSET OF DATA ELEMENT(S):    STOCK-NUMBER-AND-DESCRIPTION



-----  
DATA ELEMENT NAME: O&MN-CIVILIAN-FACULTY  
-----

ALIASES:  
-----

ASSIGNED BY: DIRECTOR OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS: NAMES OF CIVILIAN FACULTY AUTHORIZED  
BY THE DIRECTOR OF ACADEMIC PLANNING THAT CAN BE USED  
BY THE DEPARTMENT.

-----  
NOTES:

DATA FLOW: BILLET LISTING



-----  
DATA ELEMENT NAME:        OBLIGATION  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT/COMPTROLLER  
-----

VALUES AND MEANINGS:    AMOUNT OF THE FINANCIAL TRANSACTION  
      FOR THAT DATE.    THE DEPARTMENT INITIALLY OBLIGATES A  
      SPECIFIC AMOUNT OF MONEY FOR A TRANSACTION, I.E., TRAVEL,  
      MAGAZINE SUBSCRIPTIONS, BUT THE ACTUAL AMOUNT THAT IS  
      CHARGED MAY BE DIFFERENT.    WHEN THE "BILL" IS PAID, THE  
      COMPTROLLER WILL ADJUST THE FINANCIAL RECORDS.

-----  
NOTES:  
      INITIAL OBLIGATION DECREMENTS ACCOUNT-BALANCE  
  
      FILE:    OPTAR, RESEARCH  
  
      DATA FLOW:    STATUS OF FUNDS REPORT



-----  
DATA ELEMENT NAME: OCCUPATIONAL-SERIES-CODE  
-----

ALIASES: OCC  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: ARBITRARY NUMERIC CODE THAT IS  
ASSIGNED TO A CIVIL SERVICE SKILL CATEGORY, I.E.,  
203 - STAFFING CLERK

-----  
NOTES:

DATA FLOW: CPO LISTING





-----  
DATA ELEMENT NAME:       OFFICE-SPACE  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   DOLLAR VALUE OF SPACE REQUIRED TO  
                          CONDUCT RESEARCH.

-----  
NOTES:

FILE:   RESEARCH PROPOSAL

DATA FLOW:   RESEARCH PROPOSAL



-----  
DATA ELEMENT NAME:       OTHER-NPS-RESOURCE-REQR  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   DOLLAR VALUE OF RESOURCES REQUIRED  
                  TO CONDUCT RESEARCH THAT IS NOT ATTRIBUTABLE TO:  
                  OFFICE SPACE,  
                  LIBRARY RESOURCES, OR  
                  COMPUTER RESOURCES.

-----  
NOTES:

FILE:   RESEARCH PROPOSAL

DATA FLOW:   RESEARCH PROPOSAL



-----  
DATA ELEMENT NAME: OTHER-PROFESSIONAL-ACTIVITIES-EXTERNAL-  
TO-NPS  
-----

ALIASES: PROFESSIONAL  
-----

ASSIGNED BY: INSTRUCTOR  
-----

VALUES AND MEANINGS: NARRATIVE ASSIGNED BY THE PROFESSOR  
TO THE REPORT TO INDICATE PROFESSIONAL ACTIVITIES NOT  
NECESSARILY RELATED TO NPS.

-----  
NOTES:

FILE: FACULTY

DATA FLOW: FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME:       OTHER-PURCHASED-SERVICES  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   BUDGET ELEMENT FOR PROCURRED SERVICES  
                          NOT OTHERWISE IN A CATEGORY.

-----  
NOTES:

DATA FLOW:   BUDGET REQUEST

SUBSET OF DATA ELEMENT(S):   DESCRIPTION/BUDGET-ELEMENT





-----  
DATA ELEMENT NAME: OVERTIME-HOURS  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: NUMBER OF HOURS REQUESTED BY THE  
DEPARTMENT FOR SUPPORT PERSONNEL.

-----  
NOTES:

DATA FLOW: OVERTIME REQUEST

SUBSET OF DATA ELEMENT(S): ACTUAL-HOURS



-----  
DATA ELEMENT NAME: P.O. BOX  
-----

ALIASES:  
-----

ASSIGNED BY: POSTAL SERVICE/EMPLOYEE  
-----

VALUES AND MEANINGS: NUMERIC DESIGNATION OF POSTAL DELIV-  
ERY ADDRESS.

-----  
NOTES:

DATA FLOW: PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S): ADDRESS



-----  
DATA ELEMENT NAME:        PAY-BASIS

-----  
ALIASES:

-----  
ASSIGNED BY:        CIVILIAN PERSONNEL OFFICE

-----  
VALUES AND MEANINGS:    ALPHA CODE ASSIGNED TO INDICATE THE  
                         TIME PERIOD BY WHICH PERSONNEL ARE PAID:

PA	PER ANNUM
PH	PER HOUR
PD	PER DAY
WC	WITHOUT COMPENSATION

-----  
NOTES:

DATA FLOW:    CPO LISTING



-----  
DATA ELEMENT NAME:        PAY-PLAN  
-----

ALIASES:  
-----

ASSIGNED BY:     DEPARTMENT/CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:    ARBITRARY CODE (ALPHA CHARACTERS)

INDICATING THE BASIC PAY PLAN BY WHICH PERSONNEL  
WAGES ARE DETERMINED:

AD	ADMINISTRATIVELY DETERMINED
GS	GENERAL SCHEDULE
GM	MERIT PAY SYSTEM
YV	SUMMER AID
YW	STUDENT AID

-----  
NOTES:

DATA FLOW:    CPO LISTING





-----  
DATA ELEMENT NAME: PD/JD-NO  
-----

ALIASES: POSITION-DESCRIPTION/JOB-DESCRIPTION-NUMBER  
-----

ASSIGNED BY: CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS: 4 NUMERIC CHARACTERS UNIQUELY IDENTIFYING A CIVIL SERVICE POSITION

-----  
NOTES:

FILE: BILLET

DATA FLOW: CPO LISTING, SF-50

SUBSET OF DATA ELEMENT(S): EMPLOYEE-DATA



-----  
DATA ELEMENT NAME:        PERIOD  
-----

ALIASES:  
-----

ASSIGNED BY:        DEAN OF ACADEMIC ADMINISTRATION  
-----

VALUES AND MEANINGS:

<u>PERIOD</u>	<u>TIME</u>
1	0810-0900
2	0910-1000
3	1010-1100
4	1110-1200
5	1210-1300
6	1310-1400
7	1410-1500
8	1510-1600
9	1610-1700

-----  
NOTES:

DATA FLOW:    MASTER SCHEDULE



-----  
DATA ELEMENT NAME:        PERIOD-ENDING  
-----

ALIASES:  
-----

ASSIGNED BY:        COMPTROLLER  
-----

VALUES AND MEANINGS:    DATE THAT A PAY PERIOD ENDS, I.E.,  
                          10/30/83

-----  
NOTES:

DATA FLOW:    TIME CARDS



-----  
DATA ELEMENT NAME:        PLANS-FOR-198X  
-----

ALIASES:  
-----

ASSIGNED BY:        INSTRUCTOR  
-----

VALUES AND MEANINGS:

= { ACADEMIC } + { RESEARCH } + { ADMINISTRATION/GOVERN-  
ANCE } + { PROFESSIONAL }

-----  
NOTES:

FILE:    FACULTY

DATA FLOW:    FACULTY AVAILABILITY REPORT





-----  
DATA ELEMENT NAME: PLANT-ACCOUNT-NUMBER  
-----

ALIASES:  
-----

ASSIGNED BY: COMPTROLLER  
-----

VALUES AND MEANINGS: UNIQUE NUMERIC ASSIGNED TO EQUIPMENT,  
I.E., 54-4205

-----  
NOTES:

FILE: EQUIPMENT, SPACE

DATA FLOW: LABOR SAVINGS DEVICE REPORT, PLANT ACCOUNT  
REPORT

SUBSET OF DATA ELEMENT(S): EQUIPMENT-DATA



-----  
DATA ELEMENT NAME:        POSITION-STATUS  
-----

ALIASES:  
-----

ASSIGNED BY:        CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:

<u>CODE</u>	<u>DEFINITION</u>
P	PERMANENT
T	TEMPORARY

-----  
NOTES:

DATA FLOW:    CPO LISTING, FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME:        POSITION-TITLE  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    PLAIN TEXT TITLE OF POSITION, I.E.,  
                             ADJT        PROF ADMIN SCI  
                             ASSOC        PROF ECONOMICS

-----  
NOTES:

FILE:    BILLET

DATA FLOW:    SF-50, CPO LISTING, FACULTY AVAILABILITY  
                             REPORT

SUBSET OF DATA ELEMENT(S):    EMPLOYEE DATA, PREVIOUS-  
                             ACADEMIC-ASSIGNMENTS, WORK-HISTORY



-----  
DATA ELEMENT NAME:        PREVIOUS-ACADEMIC-ASSIGNMENTS  
-----

ALIASES:  
-----

ASSIGNED BY:        PROFESSOR  
-----

VALUES AND MEANINGS:

  = { INSTITUTION + POSITION-TITLE + INCLUSIVE-DATES }

-----  
NOTES:

  FILE:    FACULTY

  DATA FLOW:    PERSONAL BIOGRAPHY, FACULTY AVAILABILITY  
                  REPORT

  SUBSET OF DATA ELEMENT(S):    BIOGRAPHIC





-----  
DATA ELEMENT NAME:        PREVIOUS-ASSIGNMENT  
-----

ALIASES:  
-----

ASSIGNED BY:        NAVAL MILITARY PERSONNEL COMMAND  
-----

VALUES AND MEANINGS:    NAMES AND INCLUSIVE DATES OF PREVIOUS  
MILITARY ASSIGNMENTS, I.E.,

7/73 - 10/75	NPS
11/75 - 05/77	AVIATION SUPPLY OFFICE
06/77 - 02/79	MAAG, IRAN
03/79 - 10/80	DEFENSE LOGISTICS ANALYSIS OFFICE

-----  
NOTES:

FILE:    PERSONNEL

DATA FLOW:    MILPERS DATA



-----  
DATA ELEMENT NAME:        PREVIOUS-DEMAND  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    DEMAND FOR SUPPLIES EXPERIENCED IN  
                             THE PREVIOUS FISCAL YEAR.

-----  
NOTES:

FILE:    SUPPLIES



-----  
DATA ELEMENT NAME: PRINCIPLE-INVESTIGATOR  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: NAME OF PROFESSOR ASSIGNED TO PERFORM  
LEADING EFFORT IN RESEARCH TASK, I.E.,  
BOGER  
EUSKE

-----  
NOTES:

FILE: RESEARCH PROPOSAL



-----  
DATA ELEMENT NAME:        PROBATION-PERIOD  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT/CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:    ENDING DATE OF PROBATION FOR A CIVIL  
                         SERVICE EMPLOYEE, I.E.,  
                         YYMMDD, 831208

-----  
NOTES:

DATA FLOW:    CPO LISTING, FACULTY AVAILABILITY REPORT  
SUBSET OF DATA ELEMENT(S):    EMPLOYEE-DATA





-----  
DATA ELEMENT NAME:        PROF

-----  
ALIASES:    PROFESSOR, PROF-NAME

-----  
ASSIGNED BY:        DEPARTMENT

-----  
VALUES AND MEANINGS:

    MASTER SCHEDULE

    PROF = CODE + NAME + DEPARTMENT

<u>CODE</u>	<u>NAME</u>	<u>DEPARTMENT</u>
Bi	CDR BISHOP	AS
Bk	PROF BOGER	AS
Rh	PROF RICHARDS	OR

-----  
NOTES:

    FILE:    COURSE

    DATA FLOW:    MASTER SCHEDULE

    SUBSET OF DATA ELEMENT(S):    EMPLOYEE-DATA



-----  
DATA ELEMENT NAME:        PROFESSIONAL  
-----

ALIASES:    OTHER-PROFESSIONAL-ACTIVITIES-EXTERNAL-TO-NPS  
-----

ASSIGNED BY:        PROFESSOR  
-----

VALUES AND MEANINGS:

= { SPONSOR + ACTIVITY-NATURE + INCLUSIVE-DATES +  
     REMARKS }

-----  
NOTES:

FILE:    FACULTY

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    ACADEMIC-HISTORY

SECONDARY\_KEY



-----  
DATA ELEMENT NAME:        PROPOSAL-DATE  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT/PRINCIPLE INVESTIGATOR  
-----

VALUES AND MEANINGS:    DATE THAT RESEARCH PROPOSAL IS  
                              FORWARDED.

-----  
NOTES:

FILE:    RESEARCH PROPOSAL

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    RESEARCH



-----  
DATA ELEMENT NAME:        PROPOSED-EFFECTIVE-DATE  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT/PRINCIPLE INVESTIGATOR  
-----

VALUES AND MEANINGS:    DATE THAT RESEARCH TASKING SHOULD  
                              START.

-----  
NOTES:

FILE:    RESEARCH PROPOSAL





-----  
DATA ELEMENT NAME: PUBLISH-DATE  
-----

ALIASES:  
-----

ASSIGNED BY: PROFESSOR/PUBLISHER  
-----

VALUES AND MEANINGS: DATE THAT PUBLICATION SHOULD BE/WAS  
PUBLISHED.

-----  
NOTES:

DATA FLOW: FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S): PUBLISHING



---

DATA ELEMENT NAME: PUBLISHER

---

ALIASES:

---

ASSIGNED BY: PROFESSOR

---

VALUES AND MEANINGS: NAME OF PUBLISHER TO WHOM MANUSCRIPT  
HAS BEEN SUBMITTED FOR PUBLISHING.

---

NOTES:

DATA FLOW: TEXTBOOK ORDER



-----  
DATA ELEMENT NAME: PUBLISHING  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

= { TYPE + TITLE + TARGET + SUBMISSION-DATE + PUB-  
LISH-DATE + STATUS + (REMARKS) }

-----  
NOTES:

FILE: FACULTY

DATA FLOW: FACULTY AVAILABILITY REPORT, FACULTY  
ACTIVITY REPORT

SUBSET OF DATA ELEMENT(S): ACADEMIC-HISTORY

SECONDARY\_KEY



-----  
DATA ELEMENT NAME: PURCHASE-ORDER-NO  
-----

ALIASES: PURCHASE-ORDER-NUMBER  
-----

ASSIGNED BY: SUPPLY DEPARTMENT  
-----

VALUES AND MEANINGS:

= UIC + FY + \_\_ + SERIAL-NO

UIC = UNIT IDENTIFICATION CODE, I.E., 68271

FY = 8X, I.E., 84

\_\_ = ARBITRARY CHARACTER

SERIAL  
NUMBER = 4 NUMERIC CHARACTERS, I.E., 3378

-----  
NOTES:

FILE: EQUIPMENT

DATA FLOW: LABOR SAVINGS DEVICE REPORT, PURCHASE  
ORDER FORM, DD FORM 1155

SUBSET OF DATA ELEMENT(S): SUPPLY-DEPT-INFO





-----  
DATA ELEMENT NAME: PURCHASED-PRINTING  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: BUDGET ELEMENT FOR PRINTING CON-  
TRACTED FOR EXTERNAL TO NPS.

-----  
NOTES:

DATA FLOW: BUDGET REQUEST

SUBSET OF DATA ELEMENT(S): DESCRIPTION/BUDGET-ELEMENT



---

DATA ELEMENT NAME: QTR

---

ALIASES: QUARTER

---

ASSIGNED BY:

---

VALUES AND MEANINGS: DESIGNATION OF ACADEMIC/FISCAL

QUARTER

QTR = 

1ST QUARTER
2ND QUARTER
3RD QUARTER
4TH QUARTER

---

NOTES:

DATA FLOW: OPTAR GRANT



-----  
DATA ELEMENT NAME:        QUANTITY  
-----

ALIASES:  
-----

ASSIGNED BY:        DEPARTMENT  
-----

VALUES AND MEANINGS:    NUMERIC, INDICATING THE NUMBER OF  
                          ITEMS OF SUPPLY OR PIECES OF EQUIPMENT.

PLANT ACCOUNT REPORT = NUMBER OF PIECES OF EQUIPMENT  
   PER LOCATION

-----  
NOTES:

DATA FLOW:    PLANT ACCOUNT REPORT, REQUISITIONS, READY  
                 SUPPLY STORE REQUEST



-----  
DATA ELEMENT NAME:        QUARTER-OFFERED  
-----

ALIASES:  
-----

ASSIGNED BY:    DEPARTMENT  
-----

VALUES AND MEANINGS:    ACADEMIC QUARTER IN WHICH A SPECIFIC  
                         COURSE IS SCHEDULED TO BE OFFERED.

<u>NUMBER</u>	<u>QUARTER</u>
1	FALL
2	WINTER
3	SPRING
4	SUMMER

-----  
NOTES:

FILE:    COURSE

DATA FLOW:    COURSE PREFERENCE

SUBSET OF DATA ELEMENT(S):    COURSE-PREFERENCE





-----  
DATA ELEMENT NAME: QUARTERLY-ASSIGNMENT  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: LONG RANGE SCHEDULING BY DEPARTMENT  
CHAIRMAN FOR INDIVIDUAL INSTRUCTORS

QUARTERLY-ASSIGNMENT = FALL-QTR + WINTER-QTR + SPRING-QTR  
+ SUMMER-QTR

VALUES

MEANING

TEACH

S.D.

RESEARCH

RESEARCH FOUNDATION APPROVED TASK

IP

INTERSESSIONAL PERIOD (UNFUNDED)

I.E.,

1

2

3

4

TEACH

RESEARCH

TEACH

IP

-----  
NOTES:

FILE: FACULTY EMPLOYMENT SCHEDULE

DATA FLOW: FACULTY EMPLOYMENT WORKSHEET



-----  
DATA ELEMENT NAME: RANK  
-----

ALIASES:  
-----

ASSIGNED BY: PROVOST/NAVAL MILITARY PERSONNEL COMMAND  
-----

VALUES AND MEANINGS: ACADEMIC OR MILITARY RANK OF STAFF/  
FACULTY, I.E.,  
ASSOCIATE PROFESSOR  
COMMANDER

-----  
NOTES:

FILE: FACULTY

DATA FLOW: CPO LISTING, MILPERS DATA

SUBSET OF DATA ELEMENT(S): MILPERS-INFO



-----  
DATA ELEMENT NAME:       REGULAR-HOURS  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   THE NUMBER OF HOURS AN EMPLOYEE  
                          WORKS AT THE PERSON'S REGULAR HOURLY RATE, AS DISTING-  
                          UISHED FROM THE OVERTIME RATE OF 1.5 X REGULAR HOURLY  
                          RATE.

-----  
NOTES:

DATA FLOW:   TIME CARDS, JOB ORDER CARDS

SUBSET OF DATA ELEMENT(S):   ACTUAL-HOURS



-----  
DATA ELEMENT NAME:           REMARKS  
-----

ALIASES:  
-----

ASSIGNED BY:           DEPARTMENT/INSTRUCTOR  
-----

VALUES AND MEANINGS:   FURTHER EXPLANATION OF EARLIER  
                          INFORMATION

-----  
NOTES:

FILE:   BILLET, COURSE, EQUIPMENT, PERSONNEL, SPACE,  
         SUPPLIES

DATA FLOW:  FACULTY AVAILABILITY REPORT, SPACE UTIL-  
            IZATION REPORT, PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S):  RESEARCH, PUBLISHING, PRO-  
                              FESSIONAL, BIOGRAPHIC, AVAILABLE-SPACE-DATA





-----  
DATA ELEMENT NAME:        REQUEST-FOR

-----  
ALIASES:

-----  
ASSIGNED BY:        DEPARTMENT

-----  
VALUES AND MEANINGS:    DESCRIPTION OF LEVEL OF EFFORT DESIRED  
BY THE DEPARTMENT FROM THE PUBLIC WORKS DEPARTMENT.

REQUEST-FOR = 

COST-ESTIMATE
PERFORMANCE-OF-WORK

-----  
NOTES:

DATA FLOW:    WORK REQUEST



-----  
DATA ELEMENT NAME:           REQUIRED/RECOMMENDED  
-----

ALIASES:  
-----

ASSIGNED BY:           DEPARTMENT/INSTRUCTOR  
-----

VALUES AND MEANINGS:

<u>VALUE</u>	<u>MEANING</u>
REQUIRED	TEXTBOOK MUST BE USED BY ALL STUDENTS
RECOMMENDED	TEXT NOT REQUIRED, BUT USE WOULD BROADEN STUDENTS' EDUCATION

-----  
DATA FLOW:   TEXTBOOK ORDER



-----  
DATA ELEMENT NAME: RES  
-----

ALIASES: RESIDENT  
-----

ASSIGNED BY: RESOURCE PLANNING BOARD  
-----

VALUES AND MEANINGS:

RES = DEPARTMENT OCCUPYING A PARTICULAR LOCATION  
= DEPARTMENT CODE, I.E., 54

-----  
NOTES:

DATA FLOW: SPACE UTILIZATION REPORT



-----  
DATA ELEMENT NAME:        RESEARCH

-----  
ALIASES:

-----  
ASSIGNED BY:

-----  
VALUES AND MEANINGS:

RESEARCH = { PROPOSAL-DATE + EXPIRES + RESEARCH-AREA +  
          TITLE + TOTAL-FUNDS + COSTC + { SECONDARY-  
          INVESTIGATORS } + REMARKS } + {RESEARCH-AREA}  
          + RESEARCH-QTR

-----  
NOTES:

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    ACADEMIC-HISTORY





-----  
DATA ELEMENT NAME: RESEARCH-ACCOUNT  
-----

ALIASES:  
-----

ASSIGNED BY: COMPTROLLER  
-----

VALUES AND MEANINGS: NAME OF PRINCIPLE INVESTIGATOR WITH  
AN INDICATION OF THE NUMBER OF OTHER RESEARCH ACCOUNTS  
HE MAY HAVE HAD ACTIVE AT ONE TIME, I.E.,

ELSTER4.

-----  
NOTES: THE 4 INDICATES THAT AT THE TIME OF ASSIGNMENT,  
PROFESSOR ELSTER HAD THREE PREVIOUS RESEARCH  
ACCOUNTS IN THE FINANCIAL FILES.

DATA FLOW: STATUS OF FUNDS REPORT

SUBSET OF DATA ELEMENT(S): ITEM-DESCRIPTION



-----  
DATA ELEMENT NAME:       RESEARCH-AREA  
-----

ALIASES:  
-----

ASSIGNED BY:       PROFESSOR/DEPARTMENT  
-----

VALUES AND MEANINGS:   MAJOR FIELD OF INTEREST OF THE PRIN-  
CIPLE INVESTIGATOR, I.E.,  
MANPOWER,  
LOGISTICS.

-----  
NOTES:

FILE:   FACULTY, RESEARCH PROPOSAL

DATA FLOW:   FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   RESEARCH



-----  
DATA ELEMENT NAME: RESEARCH-QTR  
-----

ALIASES: RESEARCH-QUARTER  
-----

ASSIGNED BY: DEPARTMENT/PROFESSOR  
-----

VALUES AND MEANINGS: THE ACADEMIC QUARTER(S) THAT THE PRO-  
FESSOR(S) DESIRE TO BE ASSIGNED TO RESEARCH TASK, AND/OR  
THE QUARTER OF ACTUAL ASSIGNMENT BY THE DEPARTMENT,  
SAME COMPOSITION AS AY-QTR: YYQ, I.E., 841.

-----  
NOTES:

DATA FLOW: PERSONAL PREFERENCE REPORT

SUBSET OF DATA ELEMENT(S): RESEARCH



-----  
DATA ELEMENT NAME:        ROOM  
-----

ALIASES:  
-----

ASSIGNED BY:        DEAN OF ACADEMIC ADMINISTRATION  
-----

VALUES AND MEANINGS:

ROOM = BUILDING-CODE + ROOM-NUMBER

BUILDING-CODE

BUILDING

I

INGERSOLL HALL

R

ROOT HALL

SP

SPANAGEL HALL

-----  
NOTES:

DATA FLOW:    MASTER SCHEDULE





-----  
DATA ELEMENT NAME:        ROTATION-DATE  
-----

ALIASES:  
-----

ASSIGNED BY:        NAVAL MILITARY PERSONNEL COMMAND  
-----

VALUES AND MEANINGS:    CALENDAR MONTH/YEAR THAT A MILITARY  
                         INSTRUCTOR CAN EXPECT TO LEAVE NPS FOR ANOTHER ASSIGN-  
                         MENT.

-----  
NOTES:

DATA FLOW:    MILPERS DATA

SUBSET OF DATA ELEMENT(S):    MILPERS-INFO



-----  
DATA ELEMENT NAME:       SALARY  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT/CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:   NUMERICS, USUALLY LESS THAN 6  
                          FIGURES.

-----  
NOTES:

DATA FLOW:   CPO LISTING, FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   NPS-PROMOTION-HISTORY



-----  
DATA ELEMENT NAME:       SALARY-STEP  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   EACH GRADE-LEVEL HAS 10 INCREMENTS,  
                        WHICH ARE CALLED STEPS.   THEY ARE NUMBERED FROM 1  
                        THROUGH 10.   .

-----  
NOTES:

DATA FLOW:   CPO LISTING, SF-50, FACULTY AVAILABILITY  
                        REPORT



-----  
DATA ELEMENT NAME:       SECONDARY-INVESTIGATORS  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   OTHER PROFESSORS AUTHORIZED BY  
FUNDING SPONSOR TO PARTICIPATE IN RESEARCH:   LISTED  
BY NAME OR EMPLOYEE-NUMBER.

-----  
NOTES:

FILE:   RESEARCH PROPOSAL

DATA FLOW:   FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   RESEARCH





-----  
DATA ELEMENT NAME:           SECTION  
-----

ALIASES:           ACADEMIC-SECTION  
-----

ASSIGNED BY:           DIRECTOR OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS:

SECTION = CURRICULUM-CODE + YQ + SUBSECTION

YQ = YEAR AND QUARTER OF ENROLLMENT AT NPS

Y   = LAST DIGIT OF ACADEMIC YEAR

Q   = AY-QTR

I.E.,   41

SUBSECTION = INDICATING ONE OF (POSSIBLE) MANY  
SUBSECTIONS WITHIN THAT PARTICULAR CURRICULUM CODE,  
I.E., MP3405 IS THE ACADEMIC (SCHEDULING) SECTION,  
WHICH IS THE 5TH SUBSET OF THE GROUP OF MANPOWER  
THAT WERE FIRST ENROLLED IN THE 4TH QUARTER OF  
ACADEMIC YEAR 1983.

-----  
NOTES:

THE NUMBER OF STUDENTS PER SECTION WILL VARY.

DATA FLOW:   QUARTERLY COURSE LOAD



-----  
DATA ELEMENT NAME:           SEGMENT

-----  
ALIASES:

-----  
ASSIGNED BY:           COMPTROLLER/DEPARTMENT

-----  
VALUES AND MEANINGS:

FINANCIAL:   4 NUMERICS TO INDICATE MORE SPECIFICALLY  
              A SUBSET OF A FINANCIAL ALLOTMENT.

ACADEMIC:    A SPECIFIC COURSE TAUGHT IN A QUARTER MAY  
              HAVE FROM 1 TO "N" SEGMENTS WITH 30 STU-  
              DENTS BEING THE TARGET UPPER LIMIT FOR EACH  
              SEGMENT.  A SPECIFIC INSTRUCTOR COULD BE  
              ASSIGNED TO TEACH ONE OR ALL SEGMENTS.

-----  
NOTES:

FILE:   RESEARCH, SUPPORT-PERSONNEL-WORK-SCHEDULE

DATA FLOW:  OPTAR GRANT, JOB ORDER CHARGES



---

DATA ELEMENT NAME: SELF-IMPROVEMENT-EFFORTS

---

ALIASES:

---

ASSIGNED BY: INSTRUCTOR

---

VALUES AND MEANINGS: NARRATIVE BY PROFESSOR DESCRIBING  
PERSONAL SELF-IMPROVEMENT EFFORTS.

---

NOTES:

FILE: FACULTY

SUBSET OF DATA ELEMENT(S): INSTRUCTIONAL-ACTIVITIES



-----  
DATA ELEMENT NAME: SERVICE-TO-NPS  
-----

ALIASES: PROFESSIONAL  
-----

ASSIGNED BY: INSTRUCTOR  
-----

VALUES AND MEANINGS: EFFORTS BY FACULTY THAT WERE OF VALUE  
TO NPS IN ADDITION TO INTERNAL ACADEMIC ASSIGNMENTS.

-----  
NOTES:

DATA FLOW: FACULTY ACTIVITY REPORT





-----  
DATA ELEMENT NAME:       SOF  
-----

ALIASES:           STUDENT-OPINION-FORM  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

      SOF = { CURRICULUM } + Q1{ MEAN } Q11 + MEAN(Q1-Q11) +  
          MEAN(Q12) + MEAN(Q13)

-----  
NOTES:

      DATA FLOW:   SOF

      SUBSET OF DATA ELEMENT(S):   COURSE-HISTORY



-----  
DATA ELEMENT NAME:        SOURCE-OF-SUPPLY  
-----

ALIASES:  
-----

ASSIGNED BY:        SUPPLY OFFICER  
-----

VALUES AND MEANINGS:    DESTINATION OF PROCUREMENT REQUEST,

I.E.,

4212                READY SUPPLY STORE

4222                PURCHASING (VENDOR TO BE DETERMINED)

MONTEREY OFFICE  
SUPPLIES

DEPARTMENT'S PREFERRED SOURCE-  
SHOULD BE INDICATED ON REQUISITION  
IN THE REMARKS AREA.

-----  
NOTES:

SHOULD BE USED TO INDICATE LEAD TIME FOR REQUISITION  
IN ORDER TO PRECLUDE RUNNING OUT OF STOCK.

FILE:    SUPPLIES



-----  
DATA ELEMENT NAME:       SPACE-DATA  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

      = LOCATION + AREA + EQUIPMENT-DATA + TELEPHONE-NO

-----  
NOTES:

      DATA FLOW:   AVAILABLE SPACE DATA



-----  
DATA ELEMENT NAME:       SPONSOR  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT/INSTRUCTOR  
-----

VALUES AND MEANINGS:   ORGANIZATION TO WHOM RESEARCH PRO-  
                          POSAL OR ARTICLE/TEXT IS SUBMITTED, I.E., DOD, USN,  
                          FAA, MIT, OR ONR.

-----  
NOTES:

FILE:   RESEARCH PROPOSAL

DATA FLOW:   FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   PROFESSIONAL





-----  
DATA ELEMENT NAME: SSN  
-----

ALIASES: SOCIAL-SECURITY-NUMBER  
-----

ASSIGNED BY: SOCIAL SECURITY ADMINISTRATION  
-----

VALUES AND MEANINGS: 9 NUMERICS, MAY/MAY NOT BE SEPARATED  
BY DASHES IN FILE, I.E., NNN-NN-NNNN.

-----  
NOTES:

DATA FLOW: CPO LISTING

SUBSET OF DATA ELEMENT(S): CPO-DATA



-----  
DATA ELEMENT NAME:       STATUS  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   DESCRIPTION OF CURRENT STATE OF  
                         AFFAIRS OF A PROJECT.

-----  
NOTES:

FILE:   OPTAR

DATA FLOW:   FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   PUBLISHING



-----  
DATA ELEMENT NAME: STOCK-NO-AND-DESCRIPTION  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

= NSN + DESCRIPTION

-----  
NOTES:



-----  
DATA ELEMENT NAME: STREET-NAME  
-----

ALIASES:  
-----

ASSIGNED BY: EMPLOYEE  
-----

VALUES AND MEANINGS: ALPHA/NUMERIC NAME OF STREET, MAY BE  
LIMITED TO ARBITRARY NUMBER OF CHARACTERS, IF DESIRED,  
I.E., 15.

-----  
NOTES:

DATA FLOW: PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S): ADDRESS





-----  
DATA ELEMENT NAME: STREET-NUMBER  
-----

ALIASES:  
-----

ASSIGNED BY: EMPLOYEE  
-----

VALUES AND MEANINGS: NUMERIC DESIGNATION OF RESIDENCE ON  
A SPECIFIC STREET, USUALLY LIMITED TO 6 DIGITS, OR LESS.

-----  
NOTES:

DATA FLOW: PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S): ADDRESS



-----  
DATA ELEMENT NAME:       STUB-NUMBER  
-----

ALIASES:       DOCUMENT-NUMBER  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:

STUB NUMBER WILL CONSIST OF EITHER:

- A) JULIAN DATE AND SERIAL NUMBER OF REQUISITION,  
I.E., 3109-5591;
- B) TANGO NUMBER, IN THE CASE OF TRAVEL ORDERS: OR
- C) CODE RELATING TO A TRANSFER OF RESEARCH ACCOUNT  
FUNDS TO COVER INDIRECT COSTS.

-----  
NOTES:

TECHNICALLY, DOCUMENT-NUMBER MUST INCLUDE THE UIC  
OF THE REQUISITIONER, BUT USERS OFTEN SPEAK OF STUB-  
NUMBER AND DOCUMENT-NUMBER AS THE SAME.

FILE: OPTAR, RESEARCH

SUBSET OF DATA ELEMENT(S): DOCUMENT-NUMBER



---

DATA ELEMENT NAME:       STUDENT-NAME

---

ALIASES:

---

ASSIGNED BY:       STUDENT

---

VALUES AND MEANINGS:

      S.D.

---

NOTES:

DATA FLOW:   QUARTERLY COURSE LOAD

SUBSET OF DATA ELEMENT(S):   THESIS



-----  
DATA ELEMENT NAME:        SUBMISSION-DATE  
-----

ALIASES:  
-----

ASSIGNED BY:        INSTRUCTOR  
-----

VALUES AND MEANINGS:    CALENDAR DATE THAT PROPOSAL/ARTICLE  
                          WAS SUBMITTED:    MAY BE ALL NUMERIC OR ALPHA-NUMERIC,  
                          I.E.,    10 OCT 1983, OR 10/10/83.

-----  
NOTES:

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    PUBLISHING





-----  
DATA ELEMENT NAME:       SUBSCRIPTION/BOOKS  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   BUDGET ITEM, EXPRESSED IN DOLLARS,  
                          FOR MAGAZINE SUBSCRIPTIONS AND BOOKS.

-----  
NOTES:

DATA FLOW:   BUDGET REQUEST

SUBSET OF DATA ELEMENT(S):   ITEMS



-----  
DATA ELEMENT NAME:       SUBSIDIARY-BALANCE  
-----

ALIASES:  
-----

ASSIGNED BY:       COMPTROLLER  
-----

VALUES AND MEANINGS:   CURRENT BALANCE OF DEPARTMENT/RESEARCH  
                          ACCOUNTS AFTER THE LAST TRANSACTION LISTED.

-----  
NOTES:       ACCUMULATED TOTAL OF ALL INDIRECT FUNDS (10% FUNDS)  
              ARE NOT SPENDABLE AS A LUMP SUM, BUT MUST BE UTIL-  
              IZED AS A SEPARATE ALLOTMENT FOR EACH ACCOUNT.

FILE:   RESEARCH

DATA FLOW:   STATUS OF FUNDS



-----  
DATA ELEMENT NAME:       SUBSIDIARY-OBLIGATION  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   AN OBLIGATION OF A RESEARCH ACCOUNT,  
                          EITHER THE MAIN ACCOUNT OF THE PRINCIPLE INVESTIGATOR,  
                          OR THE INDIRECT FUNDS OF THE DEPARTMENT.  IT DECREMENTS  
                          THE SUBSIDIARY-BALANCE.

-----  
NOTES:

FILE:   RESEARCH

DATA FLOW:   STATUS OF FUNDS



-----  
DATA ELEMENT NAME: SUM-TOTAL-OF-OBLIGATIONS  
-----

ALIASES:  
-----

ASSIGNED BY: COMPTROLLER/DEAN OF RESEARCH  
-----

VALUES AND MEANINGS: VALUE OF OBLIGATIONS OF ALL INDIRECT  
FUNDS ACCOUNTS, LISTED BY ACCOUNT, FOR THE YEAR TO DATE.

-----  
NOTES:

FILE: OPTAR

DATA FLOW: STATUS OF FUNDS





-----  
DATA ELEMENT NAME: SUMMARY  
-----

ALIASES:  
-----

ASSIGNED BY: DIRECTOR OF ACADEMIC PLANNING/DEPARTMENT  
-----

VALUES AND MEANINGS:

SUMMARY = NO-DAYS + FUNDING-SOURCE , I.E.,

131 ( O&MN)

44 ( XXX )

-----  
NOTES:

FILE: FACULTY EMPLOYMENT SCHEDULE

DATA FLOW: FACULTY EMPLOYMENT SCHEDULE

SECONDARY\_KEY



-----  
DATA ELEMENT NAME: SUMMARY-OF-CATEGORY-CHARGES  
-----

ALIASES:  
-----

ASSIGNED BY: COMPTROLLER  
-----

VALUES AND MEANINGS: FINANCIAL CHARGES ARE CATEGORIZED BY  
TYPE OF CHARGE.

COLUMN

SPONSORED RESEARCH ACCOUNT

- |   |   |                              |
|---|---|------------------------------|
| 1 | - | LABOR EXPENDITURE            |
| 2 | - | ALL EXPENDITURES, LESS LABOR |
| 5 | - | AMOUNT OF FUNDS RECEIVED     |

FOUNDATION ACCOUNTS

- |   |   |   |
|---|---|---|
| 3 | - | ALL EXPENDITURES  |
| 4 | - | AMOUNT OF FUNDS PROVIDED INVE-<br>TIGATOR FROM THE MAIN FOUNDATION<br>ACCOUNT |

-----  
NOTES:

FILE: OPTAR, RESEARCH

DATA FLOW: STATUS OF FUNDS REPORT



-----  
DATA ELEMENT NAME: SUMMARY-OF-REIMB-MAN-QTRS  
-----

ALIASES: SUMMARY-OF-REIMBURSABLE-MAN-QUARTERS  
-----

ASSIGNED BY: DIRECTOR OF ACADEMIC PLANNING  
-----

VALUES AND MEANINGS: NUMERIC = SUM OF NON-INTERSESSIONAL  
PERIOD QUARTERS, THAT IS THE NUMBER OF FUNDED ( O&MN  
AND RESEARCH FUNDS) QUARTERS THAT THE DEPARTMENT CAN  
WORK WITH. THE DIFFERENCE BETWEEN THAT AND THE TOTAL  
FISCAL YEAR IS THAT AMOUNT THAT STILL NEEDS TO BE PRO-  
CURED FROM SOME FUNDING SOURCE IF ALL THE FACULTY IS TO  
BE PAID.

-----  
NOTES:

FILE: FACULTY EMPLOYMENT SCHEDULE

DATA FLOW: FACULTY EMPLOYMENT WORKSHEET



-----  
DATA ELEMENT NAME:        SUPPLEMENTARY-ADDRESS  
-----

ALIASES:        JOB-ORDER-NUMBER  
-----

ASSIGNED BY:        COMPTROLLER/DEPARTMENT  
-----

VALUES AND MEANINGS:    COMPTROLLER ASSIGNS A RANGE OF JOB  
ORDER NUMBERS, 5 ALPHA CHARACTERS, TO BE USED IN CON-  
JUNCTION WITH CHARGING ACCOUNTS;    THE DEPARTMENT IS  
RESPONSIBLE FOR USING THE CORRECT ONE FOR EACH ACCOUNT.  
THE JOB ORDER NUMBER FOR EACH ACCOUNT IS PLACED IN THE  
SUPPLEMENTARY ADDRESS FIELD OF EACH REQUISITION UPON  
SUBMITTAL.

-----  
NOTES:

DATA FLOW:    REQUISITION

SECONDARY KEY





-----  
DATA ELEMENT NAME:       SUPPLIES ( \$<\$200)  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   BUDGET ELEMENT FOR CONSUMABLE  
                          SUPPLIES, EXPRESSED IN DOLLARS.

-----  
NOTES:

DATA FLOW:   BUDGET REQUEST

SUBSET OF DATA ELEMENT(S):   DESCRIPTION/BUDGET-  
                                  ELEMENT, ITEMS.



-----  
DATA ELEMENT NAME:       SUPPLY-DEPT-INFO  
-----

ALIASES:       SUPPLY-DEPARTMENT-INFORMATION  
-----

ASSIGNED BY:       SUPPLY DEPARTMENT  
-----

VALUES AND MEANINGS:

      = PURCHASE-ORDER-NO + YEAR-ACQUIRED

-----  
NOTES:

      DATA FLOW:   LABOR SAVINGS DEVICE REPORT



-----  
DATA ELEMENT NAME: TANGO-NR  
-----

ALIASES: TANGO-NUMBER  
-----

ASSIGNED BY: COMPTROLLER/DEPARTMENT  
-----

VALUES AND MEANINGS: COMPTROLLER ASSIGNS THE RANGE OF  
TANGO NUMBERS, AND THE DEPARTMENT IS RESPONSIBLE FOR  
USING THE CORRECT NUMBER ON THE TRAVEL ORDERS.

-----  
NOTES:

SEE NPS NOTICE 4235 (SERIES)

DATA FLOW: TRAVEL ORDERS



-----  
DATA ELEMENT NAME:        TARGET  
-----

ALIASES:  
-----

ASSIGNED BY:        INSTRUCTOR  
-----

VALUES AND MEANINGS:    THE INSTITUTION TO WHICH AN ARTICLE/  
PAPER/TEXT IS SUBMITTED FOR PUBLISHING.

-----  
NOTES:

DATA FLOW:    FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):    PUBLISHING





-----  
DATA ELEMENT NAME:       TEACHING  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

TEACHING = COURSE-HISTORY + COURSE-PREFERENCE

-----  
NOTES:

SUBSET OF DATA ELEMENT(S):   ACADEMIC-HISTORY



-----  
DATA ELEMENT NAME:       TEACHING-LOAD  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT/INSTRUCTOR  
-----

VALUES AND MEANINGS:   DEPARTMENT CHAIRMAN ASSIGNS THE  
                          QUARTERLY TEACHING LOAD, EXPRESSED IN HOURS CLASSROOM  
                          CONTACT HOURS AND LABORATORY HOURS, BUT THE DATA IS  
                          GIVEN BY THE INSTRUCTOR TO THE STUDENTS FOR THEIR  
                          ENTRY ON THE SOF FORMS.

-----  
NOTES:

SUBSET OF DATA ELEMENT(S):   COURSE-HISTORY



-----  
DATA ELEMENT NAME:        TELEPHONE-CHARGES  
-----

ALIASES:  
-----

ASSIGNED BY:        PACIFIC TELEPHONE  
-----

VALUES AND MEANINGS:    EXPRESSED IN DOLLARS EACH MONTH FOR  
                             EACH SEPARATE TELEPHONE LINE.

TELEPHONE-CHARGES    =    TELEPHONE-MONTHLY-CHARGES

-----  
NOTES:

FILE:    SPACE



-----  
DATA ELEMENT NAME:        TELEPHONE-NUMBER  
-----

ALIASES:  
-----

ASSIGNED BY:        PACIFIC TELEPHONE COMPANY  
-----

VALUES AND MEANINGS:    NUMERICS, 10 DIGITS

= AREA-CODE + NNN-NNNN

AREA-CODE = 408

-----  
NOTES:

FILE:    SPACE

DATA FLOW:    PERSONAL-BIOGRAPHY ( FOR RESIDENCE NO)

SUBSET OF DATA ELEMENT(S):    SPACE-DATA, BIO-DATA





-----  
DATA ELEMENT NAME:       TENURE  
-----

ALIASES:  
-----

ASSIGNED BY:   PROVOST  
-----

VALUES AND MEANINGS:   OFFICIAL STATUS GIVEN TO A FACULTY  
                  MEMBER THAT IS, IN EFFECT, A LONG TERM CONTRACT FOR  
                  EMPLOYMENT.

-----  
NOTES:

FILE:   FACULTY

DATA FLOW:   CPO LISTING, FACULTY AVAILABILITY REPORT



-----  
DATA ELEMENT NAME:       TEXTBOOK-TITLE  
-----

ALIASES:  
-----

ASSIGNED BY:       AUTHOR  
-----

VALUES AND MEANINGS:       S.D.

-----  
NOTES:

DATA FLOW:   TEXTBOOK ORDER



-----  
DATA ELEMENT NAME: TEXTBOOK-USED  
-----

ALIASES:  
-----

ASSIGNED BY: INSTRUCTOR  
-----

VALUES AND MEANINGS: TITLE OF TEXTBOOK USED DURING  
ACADEMIC QUARTER.

-----  
NOTES:

DATA FLOW: COURSE JOURNAL

SUBSET OF DATA ELEMENT(S): COURSE-HISTORY



-----  
DATA ELEMENT NAME:        THESIS  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

THESIS = { AY-QTR + CURRICULUM + STUDENT-NAME +  
          TITLE }

-----  
NOTES:

FILE:    FACULTY

SUBSET OF DATA ELEMENT(S):    ACADEMIC-HISTORY,  
                                     INSTRUCTIONAL-ACTIVITIES.

SECONDARY\_KEY





-----  
DATA ELEMENT NAME:           TITLE  
-----

ALIASES:  
-----

ASSIGNED BY:           PROFESSOR  
-----

VALUES AND MEANINGS:   NAME OF ARTICLE/TEXT

-----  
NOTES:

FILE:   RESEARCH-PROPOSAL

DATA FLOW:   FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   PUBLISHING, RESEARCH, THESIS



-----  
DATA ELEMENT NAME: TOTAL  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

= QUANTITY X U/P

-----  
NOTES:

DATA FLOW: BUDGET REQUEST, READY SUPPLY STORE REQUEST

SUBSET OF DATA ELEMENT(S): DESCRIPTION/BUDGET-REQUEST



-----  
DATA ELEMENT NAME: TOTAL-FUNDS  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT/PRINCIPLE-INVESTIGATOR  
-----

VALUES AND MEANINGS: SUM OF ALL FUNDS CREDITED TO RESEARCH  
TASKINGS RECEIVED BY NPS.

-----  
NOTES:

FILE: RESEARCH PROPOSAL

DATA FLOW: FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S): RESEARCH



-----  
DATA ELEMENT NAME: TOTAL-REMAINING  
-----

ALIASES:  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS: DOLLAR VALUE OF FUNDS AVAILABLE IN  
CURRENT ACCOUNT.

-----  
NOTES:

DATA FLOW: FUNDS DEFICIENCY REPORT





-----  
DATA ELEMENT NAME:           TYPE  
-----

ALIASES:  
-----

ASSIGNED BY:           DEPARTMENT/PROFESSOR  
-----

VALUES AND MEANINGS:

OVERTIME-REQUEST

TYPE = 

OVERTIME
COMPENSATORY-TIME

FACULTY-AVAILABILITY-REPORT

TYPE = 

ARTICLE
TECHNICAL-REPORT
PRESENTATION
BOOK
OTHER

-----  
NOTES:

DATA FLOW:   OVERTIME REQUEST, FACULTY AVAILABILITY  
              REPORT

SUBSET OF DATA ELEMENT(S):   PUBLISHING



-----  
DATA ELEMENT NAME:           TYPE-APPOINTMENT  
-----

ALIASES:  
-----

ASSIGNED BY:           CIVILIAN PERSONNEL OFFICE  
-----

VALUES AND MEANINGS:

<u>VALUE</u>	<u>MEANINGS</u>
10	CAREER APPOINTMENT
11	CAREER-CONDITIONAL
30	TEMPORARY   NTE
70	EXCEPTED APPT W/O LIMITATION
71	EXCEPTED APPT   NTE   -----
72	VETERAN'S READJUSTMENT APPT

-----  
NOTES:

DATA FLOW:   CPO LISTING, FACULTY AVAILABILITY REPORT

SUBSET OF DATA ELEMENT(S):   CPO-DATA, EMPLOYEE-DATA



-----  
DATA ELEMENT NAME: U/P  
-----

ALIASES: UNIT/PRICE  
-----

ASSIGNED BY: DEFENSE LOGISTICS SERVICE CENTER  
-----

VALUES AND MEANINGS: STANDARD PRICE CHARGED TO THE  
CUSTOMER FOR REQUISITIONING ITEMS OF SUPPLY.

-----  
NOTES:

FILE: EQUIPMENT, SUPPLIES

DATA FLOW: REQUISITIONS



-----  
DATA ELEMENT NAME:       UPDATE-INFO  
-----

ALIASES:  
-----

ASSIGNED BY:       COMPTROLLER  
-----

VALUES AND MEANINGS:   COLUMN WILL CONTAIN EITHER:

- 1)   DATE OF SUBSEQUENT UPDATE,
- 2)   ACCUMULATED TOTAL OF TRANSACTION AFTER ALL UPDATES,
- 3)   MISCELLANEOUS CODE DESCRIBING UPDATE, I.E., LABOR.

-----  
NOTES:

FILE:   OPTAR, RESEARCH

DATA FLOW:   STATUS OF FUNDS REPORT





-----  
DATA ELEMENT NAME: USE  
-----

ALIASES: STANDARD-ROOM-USE-CATEGORIES  
-----

ASSIGNED BY: DEPARTMENT  
-----

VALUES AND MEANINGS:

<u>VALUE</u>	<u>MEANING</u>
110	CLASSROOM
310	OFFICE
535	AUDIOVISUAL, RADIO, TV SERVICE
650	LOUNGE

-----  
NOTES:

FILE: SPACE, SUPPLIES

DATA FLOW: SPACE UTILIZATION REPORT



-----

DATA ELEMENT NAME:        WEEKDAY

-----

ALIASES:

-----

ASSIGNED BY:            CONVENTION

-----

VALUES AND MEANINGS:

$$= \begin{bmatrix} \text{MONDAY} \\ \text{TUESDAY} \\ \text{WEDNESDAY} \\ \text{THURSDAY} \\ \text{FRIDAY} \end{bmatrix} = \{ \text{PERIOD} \} + \{ \text{ROOM} \} + (\text{FINAL-EXAM})$$

-----

NOTES:

DATA FLOW:    MASTER SCHEDULE



-----  
DATA ELEMENT NAME:       WORK-HISTORY  
-----

ALIASES:  
-----

ASSIGNED BY:  
-----

VALUES AND MEANINGS:

WORK-HISTORY = {       [ INSTITUTION  
                          FIRM       ]       + POSITION-TITLE +  
                          INCLUSIVE-DATES } }

-----  
NOTES:

FILE:   PERSONNEL

DATA FLOW:   PERSONAL BIOGRAPHY



-----  
DATA ELEMENT NAME:       WORK-ORDER-DATE  
-----

ALIASES:  
-----

ASSIGNED BY:       DEPARTMENT  
-----

VALUES AND MEANINGS:   CALENDAR DATE THAT WORK REQUEST WAS  
                          SUBMITTED TO THE PUBLIC WORKS DEPARTMENT:   USED TO  
                          TRIGGER FOLLOW-UP REQUESTS.

-----  
NOTES:

FILE:   SPACE

DATA FLOW:   WORK REQUEST





-----  
DATA ELEMENT NAME:       WORK-ORDER-NO  
-----

ALIASES:  
-----

ASSIGNED BY:       PUBLIC WORKS  
-----

VALUES AND MEANINGS:   ALPHA-NUMERIC DESIGNATION IN ORDER  
                  TO DESIGNATE THE DEPARTMENT'S WORK ORDER, I.E., 846-83

-----  
NOTES:

FILE:   LOCATION

DATA FLOW:   WORK REQUEST



-----  
DATA ELEMENT NAME:       WORK-ORDER-STATUS  
-----

ALIASES:  
-----

ASSIGNED BY:       PUBLIC WORKS DEPARTMENT  
-----

VALUES AND MEANINGS:   NARRATIVE TEXT (ALPHA-NUMERIC) TO  
INDICATE THE CURRENT STATE OF THE WORK REQUESTED.  
I.E.,

<u>STATUS</u>	<u>MEANING</u>
COMPLETE	
OPEN	BEFORE STATUS RECEIVED
831230	ESTIMATED DATE OF COMPLETION (EDC)

-----  
NOTES:

FILE:   SPACE

DATA FLOW:   VERBAL UPDATES TO WORK REQUEST



-----  
DATA ELEMENT NAME:        YEAR-ACQUIRED  
-----

ALIASES:  
-----

ASSIGNED BY:        SUPPLY DEPARTMENT  
-----

VALUES AND MEANINGS:    CALENDAR YEAR THAT A PIECE OF  
EQUIPMENT WAS ACQUIRED THROUGH PROCUREMENT BY THE  
SUPPLY DEPARTMENT FOR USE BY THE ADMINISTRATIVE  
SCIENCES DEPARTMENT.

-----  
NOTES:

FILE:    EQUIPMENT

DATA FLOW:    LABOR SAVINGS DEVICE REPORT

SUBSET OF DATA ELEMENT(S):    SUPPLY-DEPT-INFO



-----  
DATA ELEMENT NAME:        YEAR-AWARDED  
-----

ALIASES:  
-----

ASSIGNED BY:        UNIVERSITY  
-----

VALUES AND MEANINGS:    CALENDAR YEAR ( OR LAST TWO DIGITS)  
                          THAT DEGREE WAS AWARDED.

-----  
NOTES:

SUBSET OF DATA ELEMENT(S):    DEGREE-HISTORY





-----  
DATA ELEMENT NAME:       ZIP  
-----

ALIASES:  
-----

ASSIGNED BY:       POSTAL SERVICE  
-----

VALUES AND MEANINGS:   5 ( OR 9) DIGITS TO INDICATE THE  
                  POSTAL DELIVERY AREA, I.E., 93943 OR 93943-4220

-----  
NOTES:

DATA FLOW:   PERSONAL BIOGRAPHY

SUBSET OF DATA ELEMENT(S):   ADDRESS



## ADMINISTRATIVE SCIENCE FILES

No.	FILE/DATABASE NAME
1	BILLET
2	COURSE
3	EQUIPMENT
4	FACULTY
5	FACULTY-EMPLOYMENT-SCHEDULE
6	OPTAR
7	PERSONNEL
8	RESEARCH
9	RESEARCH-PROPOSAL
10	SPACE
11	SUPPLIES
12	SUPPORT-PERSONNEL-WORK-SCHEDULE



-----  
FILE/DATABASE NAME:                      BILLET  
-----

ALIASES:  
-----

COMPOSITION:

{ BILLET-NO + PD/JD-NO + POSITION-TITLE +  
EMPLOYEE-NUMBER + (REMARKS) }

-----  
ORGANIZATION:    DIRECT ACCESS  
-----

NOTES:

PRIMARY KEY

SECONDARY KEY

There are no billet numbers assigned to faculty.  
Psuedo billet numbers, as well as pd/jd numbers  
should be assigned to all faculty positions. The  
numbering system could have a significant structure  
to indicate academic discipline or curriculum  
specialty.



-----  
FILE/DATABASE NAME: FACULTY-EMPLOYMENT-SCHEDULE  
-----

ALIASES:  
-----

COMPOSITION:

MO + 1{ EMPLOYEE-NUMBER + QUARTERLY-ASSIGNMENT +  
SUMMARY-OF-REIMB-MAN-QTRS + { SUMMARY } +  
{ EMPLOYMENT-SCHEDULE }

-----  
ORGANIZATION: DIRECT ACCESS  
-----

NOTES:

PRIMARY KEY

SECONDARY KEYS are within QUARTERLY-ASSIGNMENT  
and SUMMARY.





-----  
FILE/DATABASE NAME:

COURSE

-----  
ALIASES:

CATALOG

-----  
COMPOSITION:

COURSE-NUMBER + COURSE-NAME + CREDIT-HOURS +

QUARTER-OFFERED + COURSE-CO-ORDINATOR +

{ PROF + AY-QTR } + (REMARKS)

-----  
ORGANIZATION:

DIRECT ACCESS

-----  
NOTES:

PRIMARY KEY

SECONDARY KEYS



-----  
FILE/DATABASE NAME: EQUIPMENT  
-----

ALIASES:  
-----

COMPOSITION:

PLANT-ACCOUNT-NUMBER + NOMENCLATURE + MAKE/MODEL  
+ SERIAL-NUMBER + USN + U/P + PURCHASE-ORDER-NO +  
YEAR-ACQUIRED + LOCATION + (REMARKS)

-----  
ORGANIZATION: DIRECT ACCESS  
-----

NOTES:

PRIMARY KEY

SECONDARY KEYS

Plant account number field may be used to insert an A/S department numbering system, i.e., D1, C1, for non-accountable furniture, such as desks and chairs. The plant account report calls for quantity of equipment per location, but this would be superfluous in this file since there would be only one record per piece of equipment.



-----  
FILE/DATABASE NAME: FACULTY  
-----

ALIASES:  
-----

COMPOSITION:

1{ EMPLOYEE-NUMBER + ACADEMIC-DISCIPLINE + RANK +  
TENURE + FACULTY-INITIAL-RANK + FACULTY=APPOINT-  
MENTS-CURRENT-RANK + FACULTY-YEARS-OF-EXPERIENCE +  
{ COURSE-HISTORY } + { COURSE-REQUESTED } +  
{ THESIS } + { PUBLISHING } + { PROFESSIONAL } +  
{ PREVIOUS-ACADEMIC-ASSIGNMENTS } + { COURSE/LABOR-  
ATORY-DEVELOPMENT } + { CONTINUING-EDUCATION-ACTIVITY }  
+ { SELF-IMPROVEMENT-EFFORTS } + PLANS-FOR-198X +  
{ RESEARCH-AREA } + { COSTC }

-----  
ORGANIZATION: DIRECT ACCESS  
-----

NOTES: NF = number of faculty.

PRIMARY KEY

SECONDARY KEYS are also within COURSE-HISTORY,  
THESIS, PUBLISHING, PROFESSIONAL, AND PREVIOUS-ACADEMIC-  
ASSIGNMENTS.



-----  
FILE/DATABASE NAME:                      OPTAR  
-----

ALIASES:  
-----

COMPOSITION:

ACCOUNT + DATE-OF-LAST-UPDATE + (SERIAL-NOS) +  
1{ITEM + {DATE + CATEGORY-CODE + ITEM-DESCRIP-  
TION + UPDATE-INFO + STUB-NUMBER + ACCOUNT-BALANCE  
+ SUM-TOTAL-OF-OBLIGATIONS } + { SUMMARY-OF-CATE-  
GORY-OF-CHARGES} + STATUS

-----  
ORGANIZATION:    DIRECT ACCESS  
-----

NOTES:

PRIMARY KEY

SECONDARY KEYS

Optar log lists obligations within item category.  
Status of funds report does not subdivide by item not  
category of charges; it lists in date of transaction order.  
Redesign should consider expanding the expense element codes  
(NPS Notice 4235) and the category of charges codes to  
correlate better with the budget category codes for easier  
development of the budget request.





-----  
FILE/DATABASE NAME: PERSONNEL

-----  
ALIASES:  
-----

COMPOSITION:

1 { CPO-DATA + (BIO-DATA) + {DEGREE-HISTORY} +  
{ WORK-HISTORY } + { NPS-PROMOTION-HISTORY } +  
( COMMERCIAL-INTERESTS ) + (REMARKS) + (MILPERS-  
INFO) } N

-----  
ORGANIZATION: DIRECT ACCESS  
-----

NOTES:

PRIMARY KEY is NAME within CPO-DATA.

N = number of employees, including civilian and  
military faculty.



-----  
FILE/DATABASE NAME:

RESEARCH

-----  
ALIASES:

-----  
COMPOSITION:

1 { COSTC + SEGMENT + EXPIRES + { ACCOUNT + DATE-  
OF-LAST-UPDATE + (SERIAL-NUMBER) + { DATE + CATE-  
GORY-CODE + ITEM-DESCRIPTION + UPDATE-INFO +  
STUB-NUMBER + SUBSIDIARY-OBLIGATION + SUBSIDIARY-  
BALANCE + { SUMMARY-OF-CATEGORY-CHARGES } } +  
{ ACCOUNT-BALANCE }

-----  
ORGANIZATION:

DIRECT ACCESS

-----  
NOTES:

Each cost code would be subdivided, at least, twice into the main research account and the department's indirect funds (10% funds). The department's accounts should then be updated current balance.

PRIMARY KEY

SECONDARY KEYS



-----  
FILE/DATABASE NAME:

RESEARCH-PROPOSAL  
-----

ALIASES:  
-----

COMPOSITION:

{ PRINCIPLE-INVESTIGATOR + { PROPOSAL-DATE + TITLE  
RESEARCH-AREA + SPONSOR + { SECONDARY-INVESTIGATORS}  
+ LABOR + (OFFICE-SPACE) + (LABORATORY-SPACE) +  
(COMPUTER-RESOURCES-REQUIRED) + (LIBRARY-RESOURCES-  
REQUIRED) + (OTHER-NPS-RESOURCES-REQR) + FUNDING-  
SOURCE + TOTAL-FUNDS + (REMARKS) } }

-----  
ORGANIZATION:

DIRECT ACCESS  
-----

NOTES:

PRIMARY KEY

SECONDARY KEYS

FUNDING-SOURCE = "XXX", until reimbursable cost code  
is assigned.

TOTAL-FUNDS = sum of all the estimates until funds are  
actually received from sponsor; at which time the exact  
amount is entered.



-----  
File/DATABASE NAME: SPACE

-----  
ALIASES: BUILDING

-----  
COMPOSITION:

{ LOCATION + { EMPLOYEE-NUMBER } + AREA + CAP +  
USE + ABCDEFG + A/N + AVAIL + TELEPHONE-NUMBER +  
{ TELEPHONE-CHARGES } + { { PLANT-ACCOUNT-NUMBER} }  
+ { WORK-ORDER-NO + WORK-ORDER-DATE + WORK-ORDER-  
STATUS + (REMARKS) }

-----  
ORGANIZATION: DIRECT ACCESS

-----  
NOTES:

PRIMARY KEY

SECONDARY KEYS





-----  
FILE/DATABASE NAME:

SUPPLIES

-----  
ALIASES:

-----  
COMPOSITION:

{ NSN + NOMENCLATURE + U/P + DEMAND + EOQ +

{ SOURCE-OF-SUPPLY } + PREVIOUS-DEMAND + (REMARKS)}

-----  
ORGANIZATION:

DIRECT ACCESS

-----  
NOTES:

DEMAND field is incremented upon receipt of material. The demand data is used to complete new fiscal year budget request and then is transferred to the PREVIOUS-DEMAND field at the start of the new fiscal year. At that time, the DEMAND field would equal zero.

PRIMARY KEY

SECONDARY KEYS



-----  
FILE/DATABASE NAME:       SUPPORT-PERSONNEL-WORK-SCHEDULE

-----  
ALIASES:

-----  
COMPOSITION:

      { EMPLOYEE-NUMBER + { DATES + DAYS + COSTC +  
      SEGNO + HPW } }

-----  
ORGANIZATION:                       DIRECT ACCESS

-----  
NOTE:

PRIMARY KEY

SECONDARY KEYS



## D. PROCESS DESCRIPTIONS

No.	PROCESS DESCRIPTIONS
1	EMPLOY PERSONNEL
2	VERIFY/UPDATE PERSONNEL-FILE
3	UPDATE-PERSONNEL-FILE (PERSONAL-DATA)
4	CHANGE PERSONNEL STATUS
5	RETRIEVE RESOURCE DATA
6	ALLOCATE RESOURCES
7	DETERMINE RESOURCE REQUIREMENT
8	RETRIEVE PERFORMANCE DATA
9	INITIATE PERSONNEL SCHEDULE
10	REVISE-PERSONNEL-SCHEDULE
11	PREPARE TIME & JOB ORDER CARDS
12	PREPARE FACULTY CERTIFICATION REPORT
13	PREPARE JOB ORDER CHARGE REPORT
14	PREPARE OVERTIME REQUEST
15	RECEIVE FUNDS
16	OBLIGATE FUNDS
17	UPDATE OPTAR/RESEARCH ACCOUNTS
18	DETERMINE REVISED FUNDING METHOD
19	SUBMIT UNFUNDED REQUIREMENTS REQUEST
20	SUBMIT RESEARCH PROPOSAL
21	SUBMIT BUDGET REQUEST
22	ACQUIRE PROPERTY
23	MODIFY SPACE/EQUIPMENT
24	PRODUCE REPORTS
25	PRODUCE REPORTS, contd
26	DISPOSE OF PROPERTY



---

PROCESS NAME: EMPLOY PERSONNEL

---

PROCESS NUMBER: 1.1.1

---

PROCESS DESCRIPTION:

FOR EACH new employee

BUILD new PERSONNEL-FILE record

IF civilian

USE SF-50 for all available data

IF military

USE MILPERS-DATA for data input





-----  
PROCESS NAME:       VERIFY/UPDATE PERSONNEL-FILE  
-----

PROCESS NUMBER:       1.1.2.1  
-----

PROCESS DESCRIPTION:

    UPON RECEIPT of CPO-LISTING

        ACCESS each PERSONNEL-FILE record

        FOR EACH new employee

            ADD data not already in file

        FOR ALL employees

            COMPARE data in CPO-LISTING with PERSONNEL-FILE

            IF data not equal

                VALIDATE, if inconsistent

                UPDATE PERSONNEL-FILE

    UPON RECEIPT of BILLET-LISTING

        ACCESS all BILLET-FILE records

            ADD/DELETE BILLET-NUMBERS, if necessary

        FOR EACH BILLET-NO with no EMPLOYEE-NO

            NOTIFY management, if necessary

        FOR EACH employee without a BILLET-NO

            ADD temporary BILLET-NO to BILLET-FILE

            NOTIFY management of excess personnel

    IN ANY CASE

        NOTIFY management that PERSONNEL-FILE updated

        SUBMIT REQUEST-FOR-PERSONNEL-INFORMATION  
-----



-----  
PROCESS NAME:           UPDATE-PERSONNEL-FILE (PERSONAL-DATA)  
-----

PROCESS NUMBER:        1.1.2.2  
-----

PROCESS DESCRIPTION:

FOR EACH new employee

    ACCESS each PERSONNEL-FILE record

    RETRIEVE PERSONAL-BIOGRAPHY-REPORT

    LOAD data not already in file

FOR all faculty

    UPON RECEIPT of each PERSONAL-PREFERENCE-REPORT

    LOAD most recent data to FACULTY-FILE

IN ANY CASE

    NOTIFY management PERSONNEL-AVAILABILITY-FOR-  
    ASSIGNMENT



-----  
PROCESS NAME:       CHANGE PERSONNEL STATUS  
-----

PROCESS NUMBER:       1.1.2.3  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of MANAGEMENT-ACTION

RETRIEVE applicable PERSONNEL-FILE record

SUBMIT REQUEST-FOR-PERSONNEL-ACTION to CPO

RECORD in REMARKS of PERSONNEL-FILE type and date  
of personnel action requested



-----  
PROCESS NAME:       RETRIEVE RESOURCE DATA  
-----

PROCESS NUMBER:       1.2.1  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of PERSONNEL-AVAILABILITY-FOR-ASSIGNMENT

ACCESS PERSONNEL-FILE record

ACCESS SPACE-FILE

LIST all unassigned LOCATIONS

IF no LOCATIONS vacant

NOTIFY management

ACCESS EQUIPMENT-FILE

LIST all EXCESS EQUIPMENT

PRODUCE RESOURCE-DATA-DISPLAY





---

PROCESS NAME:        ALLOCATE RESOURCES

---

PROCESS NUMBER:        1.2.2

---

PROCESS DESCRIPTION:

UPON RECEIPT of RESOURCE-DATA-DISPLAY

ASSIGN personnel to vacant LOCATION

REDISTRIBUTE excess EQUIPMENT

UPDATE PERSONNEL & EQUIPMENT-FILES

SUBMIT

PERSONNEL-NOTIFICATION-OF-ASSIGNMENT

RESOURCE-AVAILABILITY-FOR-SCHEDULING



-----  
PROCESS NAME:            DETERMINE RESOURCE REQUIREMENT  
-----

PROCESS NUMBER:        1.3.1  
-----

PROCESS DESCRIPTION:

    UPON RECEIPT of

        PERSONNEL-AVAILABILITY-FOR-SCHEDULEING

    IF support personnel

        SUBMIT SUPPORT-PERSONNEL-REQUIREMENT

    IF faculty

        UPON RECEIPT of ANNUAL-COURSE-LOAD

        ACCESS COURSE-FILE

            Compare ANNUAL-COURSE-LOAD with courses  
            offered from COURSE-FILE

                LIST courses required NOT normally  
                offered

                LIST courses required normally offered

        ACCESS RESEARCH-FILE

            LIST open RESEARCH-ACCOUNTS

        SUBMIT COURSE/RESEARCH-REQUIRED  
  
-----



---

PROCESS NAME: RETRIEVE PERFORMANCE DATA

---

PROCESS NUMBER: 1.3.2

---

PROCESS DESCRIPTION:

UPON RECEIPT of

COURSE-JOURNAL

THESIS-REPORTS

STUDENT-OPINION-FORM-STATISTICS

FACULTY-ACTIVITY-REPORT

LOAD data into FACULTY-FILE

SUBMIT

FACULTY-AVAILABILITY-REPORT



---

PROCESS NAME:           INITIATE PERSONNEL SCHEDULE

---

PROCESS NUMBER:         1.3.3

---

PROCESS DESCRIPTION:

    UPON RECEIPT of

        SUPPORT-PERSONNEL-REQUIREMENT

            ACCESS SUPPORT-PERSONNEL-WORK-SCHEDULE

                ASSIGN SUPPORT-PERSONNEL

                    UPDATE SUPPORT-PERSONNEL-WORK-SCHEDULE

        FACULTY-AVAILABILITY-REPORT

        COURSE/RESEARCH-REQUIREMENTS

            ACCESS FACULTY-EMPLOYMENT-SCHEDULE-FILE

            ASSIGN faculty to

                Required COURSE-NUMBER

                RESEARCH-QUARTER

    SUBMIT

        FACULTY-EMPLOYMENT-WORKSHEET

        TENTATIVE-FACULTY-SCHEDULE





-----  
PROCESS NAME: . REVISE-PERSONNEL-SCHEDULE  
-----

PROCESS NUMBER: 1.3.4  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of

TENTATIVE-FACULTY-SCHEDULE

FACULTY-BUDGET

DETERMINE FUNDING-SOURCE for reimbursable MQ

REVISE FACULTY-EMPLOYMENT-SCHEDULE, if necessary

SUBMIT FACULTY-EMPLOYMENT-SCHEDULE to the

dean of information and policy sciences

ACCESS COURSE-FILE

FOR applicable AY-QTR

DISPLAY all COURSE-NUMBERS AND PROF-  
NAMES

REVISE COURSE-FILE, as appropriate

SUBMIT FACULTY-COURSE-DATA to dean of academic  
administration - scheduler (code 0144)

SUBMIT TEXTBOOK-ORDER to bookstore (code 48)

UPON RECEIPT of MASTER-SCHEDULE

VERIFY correct course assignment

IF ERROR NOTIFY

scheduler

curriculum officer

PREPARE LOCATOR-SCHEDULE for each PROF-NAME

BI-WEEKLY

RECEIVE FACULTY-EXCEPTION-REPORT

SUBMIT WORK-PERFORMED-REPORT

-----



---

PROCESS NAME:       PREPARE TIME & JOB ORDER CARDS

---

PROCESS NUMBER:       1.4.1

---

PROCESS DESCRIPTION:

    UPON RECEIPT of WORK-PERFORMED-REPORT from supervisors

        IF FACULTY

            SUBMIT EXCEPTION-REPORT

        FOR EACH civilian of support staff

            SUBMIT TIME-CARD to comptroller department

        FOR personnel chargeable to research account

            SUBMIT RESEARCH-SUPPORT-REPORT

        ELSE

            SUBMIT JOB-ORDER-CARD to comptroller department



-----  
PROCESS NAME:        PREPARE FACULTY CERTIFICATION REPORT  
-----

PROCESS NUMBER:        1.4.2  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of FACULTY-EXCEPTION-REPORT

FOR EACH FACULTY

LIST exceptions to FACULTY-EMPLOYMENT-SCHEDULE  
SUBMIT FACULTY-CERTIFICATION-REPORT to director  
of academic planning



-----  
PROCESS NAME:           PREPARE JOB ORDER CHARGE REPORT  
-----

PROCESS NUMBER:        1.4.3  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of RESEARCH-SUPPORT-REPORT

VERIFY INCLUSIVE-DAYS are charged to COSTC

IF NOT determine FUNDING-SOURCE

LIST FUNDING SOURCE by INCLUSIVE-DATES

SUBMIT corrected JOB-ORDER-CHARGE-REPORT to  
dean of research

SUBMIT JOB-ORDER-CHARGE-REPORT to dean of research  
indicating NO CHANGE





---

PROCESS NAME:        PREPARE OVERTIME REQUEST

---

PROCESS NUMBER:        1.4.4

---

PROCESS DESCRIPTION:

UPON RECEIPT of SUPERVISOR'S REQUEST

    PREPARE OVERTIME-REQUEST

FOR research support personnel

    SUBMIT OVERTIME-REQUEST to dean of research

ELSE

    SUBMIT to dean of information and policy sciences



-----  
PROCESS NAME:       RECEIVE FUNDS  
-----

PROCESS NUMBER:       2.1  
-----

PROCESS DESCRIPTION:

    UPON RECEIPT of OPTAR-GRANT

        IF O & MN

            IF start of fiscal year

                ESTABLISH ACCOUNT-BALANCE = 1st QTR target

    ELSE

        BUILD RESEARCH-FILE record with .

            COSTC

            ACCOUNT name

            as listed in the OPTAR-GRANT

UPON RECEIPT of STATUS-OF-FUNDS-REPORT

    VERIFY that ACCOUNT-BALANCE increased by OPTAR-GRANT  
    amount

        FOR research ACCOUNT

            BUILD RESEARCH-FILE record

                ACCOUNT = DEPTAS

                ACCOUNT-BALANCE = amount listed on

                STATUS-OF-FUNDS-REPORT as indirect costs

                (10% funds)

-----



-----  
PROCESS NAME: OBLIGATE FUNDS  
-----

PROCESS NUMBER: 2.2  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of EXPENDITURE-REQUEST

DETERMINE FUNDING SOURCE

IF FACULTY-TAD

SUBMIT TRAVEL-MATTER INQUIRIES to psd, if  
necessary

travel and per diem rates,

travel regulation questions

UPON RECEIPT of INQUIRIES-RESPONSE

PREPARE TRAVEL-ORDERS

IF SUPPLIES

DETERMINE SOURCE-OF-SUPPLY

IF stocked by supply department

PREPARE READY-SUPPLY-STORE-REQUEST

IF research support staff LABOR-OBLIGATION

SUBMIT TIME-CARDS to comptroller dept

VERIFY correct COSTC as shown on

JOB-ORDER-CHARGES-REPORT

ESTABLISH transaction in proper ACCOUNT, listing

DEPT; CATEGORY-CODE; ITEM-DESCRIPTION: STUB-

NUMBER: OBLIGATION= ESTIMATED-COST

OBTAIN AUTHORIZED-SIGNATURE

FOR charges against research ACCOUNT

SUBMIT document via research office

ELSE SUBMIT document to comptroller dept  
-----



-----  
PROCESS NAME:           UPDATE OPTAR/RESEARCH ACCOUNTS  
-----

PROCESS NUMBER:        2.3.1  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of STATUS-OF-FUNDS-REPORT

VERIFY all transactions entered in OPTAR/RESEARCH-  
FILE since DATE-OF-LAST-UPDATE are listed on the  
REPORT

IF NOT notify comptroller/research office  
FOR all transactions on REPORT with UPDATE-INFO entry

ADD complete transaction to OPTAR/RESEARCH-FILE  
IF transactions on REPORT NOT in FILE

NOTIFY comptroller if erroneous

ELSE RECORD complete transaction

DETERMINE posting error cause

SUBMIT FUNDING-DEFICIENCY-REPORT

IF ACCOUNT-BALANCE less than known requirements

IF product of RATIO and TOTAL-FUNDS authorized  
is greater than ACCOUNT-BALANCE

-----  
NOTE: RATIO = (current Julian date)/365





---

PROCESS NAME:         DETERMINE REVISED FUNDING METHOD

---

PROCESS NUMBER:       2.3.2

---

PROCESS DESCRIPTION:

UPON RECEIPT of FUNDING-DEFICIENCY-REPORT

LIST

all known unfunded requirements

EXPENDITURE-HISTORY

IF RESEARCH-FILE ACCOUNT

LIST all accounts for which

PRINCIPLE-INVESTIGATOR is also

SECONDARY-INVESTIGATOR

DETERMINE FUNDING-SOURCE

IF requirements are necessary before new funding  
is expected

SUBMIT EMERGENCY-REQUEST



---

PROCESS NAME:       SUBMIT UNFUNDED REQUIREMENTS REQUEST

---

PROCESS NUMBER:       2.4.1

---

PROCESS DESCRIPTION:

    UPON RECEIPT of

        EXPENDITURE-HISTORY

        EMERGENCY-REQUEST

    DETERMINE FUNDING-SOURCE

        IF RESEARCH-FILE ACCOUNT

            SUBMIT AUGMENTATION-REQUEST to research office

    ELSE

        SUBMIT UNFUNDED-REQUIREMENTS-REQUEST to dean of  
            information and policy sciences



-----  
PROCESS NAME:       SUBMIT RESEARCH PROPOSAL  
-----

PROCESS NUMBER:       2.4.2  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of RESEARCH-IDEA

    COMPILE EXPENDITURE-HISTORY of similar projects

    COMPLETE RESEARCH-PROPOSAL

    DETERMINE FUNDING-SOURCE

        IF nps research foundation

            SUBMIT RESEARCH-PROPOSAL to dean of infor-  
            mation and policy sciences

        ELSE

            SUBMIT RESEARCH-PROPOSAL to research office



---

PROCESS NAME:           SUBMIT BUDGET REQUEST

---

PROCESS NUMBER:         2.4.3

---

PROCESS DESCRIPTION:

WHEN REQUESTED

COMPLETE EXPENDITURE-HISTORY

COMPILE new requirements

PROVIDE JUSTIFICATION for necessary ITEMS

SUBMIT BUDGET-REQUEST to dean of information and  
policy sciences





-----  
PROCESS NAME:           ACQUIRE PROPERTY  
-----

PROCESS NUMBER:        3.1  
-----

PROCESS DESCRIPTION:

FOR EACH MATERIAL-RECEIPT-DOCUMENT

    VERIFY that PROPERTY was requisitioned by DEPT

    VERIFY that document data EQUALS PROPERTY

    IF DISCREPANCY exists NOTIFY supply department

    OTHERWISE

        IF PROPERTY EQUALS EQUIPMENT

            BUILD EQUIPMENT-FILE record

            ASSIGN LOCATION

            IF EQUIPMENT has PLANT-ACCOUNT-NO

                NOTIFY comptroller department

            MOVE EQUIPMENT to LOCATION

        IF PROPERTY EQUALS SUPPLIES

            ACCESS SUPPLIES-FILE

            INCREMENT DEMAND by QUANTITY received

            MOVE SUPPLIES to the vault

        IF PROPERTY EQUALS DIRECT-TURNOVER(DTO)

            MOVE DTO to PROF

    IN ANY CASE

        ACCESS OPTAR-RESEARCH-ACCOUNT-FILE

        STATUS = "RECEIVED" + DATE

        FILE MATERIAL-RECEIPT-DOCUMENT  
-----



-----  
PROCESS NAME:       MODIFY SPACE/EQUIPMENT  
-----

PROCESS NUMBER:       3.2.1  
-----

PROCESS DESCRIPTION:

UPON receipt of MANAGEMENT-DIRECTION

    SUBMIT WORK-REQUEST to public works department  
        to MOVE EQUIPMENT to a different LOCATION,  
        to MODIFY LOCATION physical characteristics.  
THEN RECORD WORK-REQUEST-NUMBER and -DATE in  
SPACE-FILE

UPON COMPLETION of work

    IF EQUIPMENT

        RECORD new LOCATION in EQUIPMENT-FILE

    IF SPACE modification

        RECORD new data in SPACE-FILE

IN ANY CASE

    RECORD COMPLETION of work request in SPACE-FILE  
  
-----



-----  
PROCESS NAME:       PRODUCE REPORTS  
-----

PROCESS NUMBER:       3.2.2  
-----

PROCESS DESCRIPTION:

    QUARTERLY

        ACCESS SPACE-FILE for all work orders

            WHERE STATUS NOT EQUAL COMPLETE

        REQUEST STATUS from public works department

    ANNUALLY

        RETRIEVE from EQUIPMENT-FILE all data for

            LABOR-SAVINGS-DEVICE-REPORT

        VERIFY EQUIPMENT

            NOMENCLATURE

            MAKE/MODEL

            PLANT-ACCOUNT-NO (if applicable)

            SERIAL-NO

            LOCATION

        CORRECT EQUIPMENT-FILE, if necessary

        SUBMIT report to supply department

        RETRIEVE from SPACE-FILE all data for

            SPACE-UTILIZATION-REPORT

        VERIFY LOCATION WITH

            occupant (EMPLOYEE-NUMBER)

            USE

            TELEPHONE-NUMBER

            all EQUIPMENT  
-----



-----  
PROCESS NAME:       PRODUCE REPORTS, contd  
-----

PROCESS NUMBER:       3.2.2, contd  
-----

PROCESS DESCRIPTION:

      CORRECT SPACE/EUIPMENT-FILES, if necessary

      SUBMIT report to public works officer

TRI-ENNIENALLY

      RETRIEVE from EQUIPMENT-FILE for

      PLANT-ACCOUNT-REPORT

      VERIFY PLANT-ACCOUNT-NO with

      NOMENCLATURE

      MAKE/MODEL

      SERIAL-NO

      LOCATION

      CORRECT EQUIPMENT-FILE if necessary

      SUBMIT report to comptroller department  
  
-----





-----  
PROCESS NAME: DISPOSE OF PROPERTY  
-----

PROCESS NUMBER: 3.3  
-----

PROCESS DESCRIPTION:

UPON RECEIPT of DISPOSAL-REQUEST

RETRIEVE EQUIPMENT record from EQUIPMENT-FILE

IF UNFUNDED-REQUIREMENT exists

NOTIFY MANAGEMENT

IF NO UNFUNDED-REQUIREMENT

NOTIFY FACULTY/STAFF of excess EQUIPMENT

IF NO CLAIMANTS

SUBMIT MATERIAL-TURN-IN-REQUEST to supply  
dept

IN ANY CASE

UPON EQUIPMENT movement

CHANGE EQUIPMENT-FILE accordingly



## FOOTNOTES

### CHAPTER I.

- <sup>1</sup>Information is commonly defined as data used in decision making.
- <sup>2</sup>Throughout this work, the view of the data/information is that of a flow throughout a network.

### CHAPTER II.

- <sup>3</sup>The term "user" will be used throughout this narrative as either singular or plural, but can be roughly translated as "worker".
- <sup>4</sup>Physical, in this context, means the description of the physical flow, normally in terms of ADP hardware processing.
- <sup>5</sup>DeMarco classifies users as hands-on users, responsible users, and system owners.
- <sup>6</sup>For the initiated reader, this was an unplanned example within an example.
- <sup>7</sup>That does not rule out the possibility that the "new" system may not be cost-effective and, therefore, not implemented.
- <sup>8</sup>The traditional, un-wieldy, error-prone document associated with the "old-style" of analysis was named the Functional Specification. The name change is to indicate a substantial change in the analysis output format rather than any substantial functional change.
- <sup>9</sup>If necessary to obtain agreement, the analyst must be prepared to start over, re-partitioning, if required, until the analyst—not the user—has the correct perspective.
- <sup>10</sup>The system design person will be discussed later in this chapter.



<sup>11</sup>The number of iterations can be shown in the form of sub/superscripts, or with numbers before/after the braces to indicate the lower and upper limits, respectively.

<sup>12</sup>DeMarco suggests that the analyst debrief the user(s) at various stages of the analysis by "walking-through" the Data Flow Diagrams and their associated details.

<sup>13</sup>Because of time constraints, this author did not define this study to include the New Physical Data Flow nor the Systems Specifications.

### CHAPTER III.

<sup>14</sup>For each decomposition of a process, the resultant components are depicted pictorially at a lower "level"—thus the term for the decompositioning has been adapted by DeMarco as "leveling."

<sup>15</sup>If all the decompositions of all the levels are summed, then to coin a new word, the top level is the "de-partitioned" view of the system.

<sup>16</sup>A data "sink" is a technical term in Network Theory. The reader should translate it as "destination."

<sup>17</sup>Usually, "unplanned" is a quality that can be attributed to the requestor.

<sup>18</sup>At this point, the author also chooses to make a major departure from DeMarco's technique. Because of the close-knit organization of the Department, there was not much difference between the current Physical Data Flow and the current logical Data Flow (see Chapter II). The Physical Data Flows were essentially ignored.

<sup>19</sup>A particular box code may appear more than once, but that is just an effort to avoid confusion from crossing lines.

<sup>20</sup>At the time of commencing the analysis, many of the files were loosely organized, non-existent, or only conceptual.

<sup>21</sup>A reminder—the decision to mechanize all the data stores, or not, need not be made now.

<sup>22</sup>See above Note 21.



## CHAPTER IV.

- <sup>23</sup>The general rule of thumb is that the analyst should only show seven, or less, "bubbles", or operations, on any Data Flow Diagram.
- <sup>24</sup>The reader must be able to absorb the sense of the flow. Flows that continue on to additional pages disrupt the thought process.

## CHAPTER V.

- <sup>25</sup>The files are described rather than defined. The alphanumeric characteristics of each element may be deferred until the design phase.
- <sup>26</sup>VFW, San Francisco, 1981.
- <sup>27</sup>Data elements are in alphabetical order. New data elements defined subsequently to this study may be inserted in alphabetical order.
- <sup>28</sup>Winston Churchill is quoted, replying to an aide's correction of Churchill's sentence which ended with a preposition, "This is the type of nonsense up with which I shall not put."

## CHAPTER VI.

- <sup>29</sup>The difference between a file and a database is that a file can only be accessed by the way it is ordered. A database can be accessed by other keys as well.





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